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ORIGINAL ARTICLES.

EVULSION AS A MEANS OF RADICAL CURE OF PTERYGIUM.

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

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Whether the limited amount of literature upon the treatment of pterygium is evidence that the highest degree of perfection possible in that direction has been attained, and that the various means proposed for its removal are all that can be desired, or that the subject is such as not to demand any special attention, certain it is, the methods employed for the removal of these morbid growths have been very unsatisfactory, and patients fail to receive such an assurance of benefit as it is desirable they should have.

Although the affection is of little importance unless it implicates the cornea to such an extent as to obstruct the vision, yet its appearance to many, and especially to its possessor, is more or less repugnant, and patients are generally solicitous to rid themselves of its presence.

Pterygium consists of hypertrophied tissue, often very trifling in amount, but sometimes very considerable and unsightly. This morbid growth is fibrous in structure and is not firmly adherent to the cornea and sclerotic. It is not covered with conjunctival tissue, but with an epithelial substance peculiar to itself which surrounds the hypertrophied mass, and is entirely disconnected from the conjunctiva, except at the linear adhesion on its under surface, where it acts in the manner of a pedicle.

It seldom reaches or passes the centre of the cornea, for the reason, perhaps, that the blood-vessels which feed it do not extend further, usually, than that point.

Without attempting to discuss the cause of this morbid growth, it is our object to consider the most feasible means for its thorough and permanent removal. Authors mention various methods for this purpose, which resolve themselves into three plans of operating, viz.: excision, transplantation and ligation, or a combination of two or all of these methods; thus, one recommends its entire removal by excision, by dissecting it from its apex to the semilunar fold, where it is excised; another recommends dissection of the apex from the cornea to its base, and then inserting the dissected portion underneath the conjunctiva, where it is held by sutures; another advocates the ligation of the base and the dissection and excision of the apex; and finally, another the ligation of both the base and apex together with the narrow strip underneath the growth, where the ligatures are allowed to remain until the growth sloughs away. If any of these methods or any of their combinations have given general satisfaction, I am not aware of it; but, on the contrary, oculists usually discourage patients from having anything done with the affection unless it encroaches so far over the cornea as to interfere materially with vision.

In a practice of more than twenty years, during which time I have attempted the removal of quite a number of these growths by one or another of the methods herein enumerated, I can recall but one case in which the result was all that could be desired; but, on the other hand, many of them were not benefited in the least, the operation frequently having resulted in unsightly cicatrices.

Arlt has demonstrated that pterygium *enters into the substance of the cornea, beneath its epithelial layer*, yet, as previously mentioned, the connection is *not firm, and its fibres can be readily separated from the cornea with very little effort.*

A few years ago, before the anæsthetic properties of cocaine were discovered, I attempted to remove a large pterygium in the case of a man who was somewhat under the influence of liquor. I caught the growth near its apex with the forceps. When I was about to separate it from the cornea with the scissors, he made a desperate effort at resistance, and caught my arm with which I was holding the forceps so suddenly that I did not have time to relax my hold. It bled freely, and I was fearful that the eye was badly injured. After a considerable time I was allowed to cleanse the eye, when I found that the pterygium was entirely separated from the cornea and as far back as midway between the sclero-corneal junction and the caruncula lachrymalis.

That part of the cornea to which the growth had been attached was somewhat hazy, and presented the appearance of numerous small depressions not larger than pin-points, showing the points where the fibres had penetrated the cornea. The patient would not permit me to proceed farther—not even to excise the loose tissue remaining.

I recommended the application of cold water to the eye and advised him to return daily, that I might

watch the eye. He went home and, as he suffered no pain, concluded he was doing well enough, and did not return for three weeks, at which time the detached tissue had contracted and I could scarcely see any corneal opacity or other evidence that the eye had ever been affected with pterygium.

What I so much feared in this case was that the corneal layers had been separated and, as a result, corneal ulceration; or, on the other hand, infiltration between the separated layers and a consequent extensive opacity.

Subsequently I thought little of the occurrence more than to congratulate myself how fortunate I had been in not having destroyed the man's eye, until some time afterwards I was relating the circumstances to a physician, when he gave me the following:

An old gentleman of his acquaintance had a large pterygium on each eye. He had been having his eyes "treated" from time to time by different parties, principally traveling "specialists," without benefit, when, in conversation with his family physician, he was informed that treatment in such cases was not generally successful, that his eyes would probably not become worse, and he was advised to desist.

The old gentleman had his own idea about the matter, and insisted that the growth would continue to "cover the sight" and in a short time leave him hopelessly blind. He argued that his disease was similar to that of the horse, known as "*hooks*," and that "hooks" are cured simply by "pulling them off." He concluded to act in his own behalf and, having procured a small pair of forceps, such as is commonly known as "eye tweezers," he actually removed the pterygia from both eyes, and without subsequent treatment the procedure effected a permanent cure.

I have ascertained that the affection known as "hooks" in the horse is simply an attachment of the membrana nictitans to the cornea, the adhesion being, probably, the result of an inflammatory action of this membrane and the ocular conjunctiva.

Shortly after this, I presume about two years ago, I noticed in some medical journal that a foreign oculist, Arlt, I believe, was removing pterygium by evulsion, and being greatly interested, by reason of the circumstances just mentioned, I have been anxiously waiting to hear with what success. So far I have been disappointed.

For the past eighteen months I have used no other means in the removal of pterygium than evulsion. As yet I have had only a few cases, but the result in each has been eminently satisfactory.

In my first operations I removed the apex, and as far back as the caruncula lachrymalis, with the forceps, and excised the loose tissue with the scissors. Afterwards I ligated the base first and then removed the growth with the forceps as far as the ligature, and excised as near it as possible. In this I found a great advantage, inasmuch as the ligature prevented hæmorrhage and I could operate to a better advantage.

Recently, at the suggestion of Dr. Baldwin, of this city, while assisting me in an operation, I discarded the forceps, and took in its stead a blunt hook—such as is used in the operation for strabismus—which I am pleased to find a much better instrument for this purpose.

After the base has been ligated the pterygium is separated from its attachment with the blunt hook, by running it under a small portion at a time, especially if the pterygium is large; first separating the thin connection between the ligature and the cornea; then a small portion of the corneal attachment at a time, until the whole is removed.

The loose tissue is excised as close to the ligature as possible, cold water dressings are used, and the ligature is allowed to remain until the strangulated portion sloughs, when it, with the ligature, will become detached and pass off.

The advantage of this operation is the *complete and thorough* removal of the growth from the parts into which it has been imbedded, without the injury or superfluous removal of any normal tissue.

THE TREATMENT OF NERVOUS AND MENTAL DISEASE BY SYSTEMATIZED ACTIVE EXERCISE.

Read before the Philadelphia County Medical Society, on January 11, 1888.

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Exercises or movements for medical purposes, medical gymnastics, in other words, have been divided and subdivided to an absurd degree by Ling and his followers. Schreiber gives an example of a German term for what is called the quarternary combination of the standing position, which term contains forty-five letters and nine different words, although it is written in German as a single word. The division, however, into such movements or exercises as passive, duplicated active, and active, is rational and useful. Passive movements are performed upon the patient or individual, his will not coming into play except in submitting. In duplicated active movements, both the operator and the individual treated, take part; the first resisting while the second acts, or the reverse. Sometimes these movements are spoken of as semi-active and semi-passive; in the former, the physician or operator resists; in the latter, the subject resists. Movements of this class are of the greatest value in some forms of nervous or neuro-muscular disease, but it is not my purpose to discuss them, unless it be incidentally, in this paper; nor do I intend, except perhaps in the same manner, to speak of massage.

It is of systematized active exercises, that I will more particularly speak. The expression single active movement indicates that the movement is performed by a single individual without direct assistance, although it may be done under the orders of a physician or master. Exercise of this kind may be performed either with or without apparatus, and even when the latter is used it need not necessarily be expensive. While massage and electricity have received a large share of attention from neurologists, they have neglected too much the use of medical gymnastics, particularly systematized active exercises. Masseurs and masseuses, good, bad, and

indifferent, now abound in our large cities, but good instructors in physical culture, as applied to medical purposes, are not numerous.

"Gymnastics," "exercises," and "movements," by some medical writers are used as practically synonymous. Dr. George H. Taylor, however, claims that we should carefully distinguish between gymnastics and movements, and between calisthenics and movements, and that evil has grown out of confounding these terms. It is probably better in a medical paper to speak with precision of "movements" or "exercises," designating the particular kind, but "medical gymnastics" covers the whole ground, and the word "gymnastic," or "gymnastics," used in a general sense, may be properly employed in medicine.

I will not give much space to a discussion of literature, but will refer briefly to a few important publications, including those which I have chiefly consulted in the preparation of this paper.

The attention of the profession of this country has been too little attracted to the publications, and the practical work of the brothers, Dr. George H. Taylor and Dr. Charles Fayette Taylor, of New York, who may be regarded as the pioneers in this country of the gymnastic treatment of disease. They deserve great credit for their efforts, not wholly appreciated. As early as 1861 a book was issued on *The Theory and Practice of the Movement Cure*, by Charles Fayette Taylor, M.D., in which is discussed in an interesting and practical way, the treatment by Swedish movements, of curvatures, paralysis, indigestion, constipation, diseases of women, etc. In 1879 appeared a treatise entitled *An Exposition of the Swedish Movement Cure*, etc., by George H. Taylor, A.M., M.D. Dr. Benjamin Lee, of Philadelphia, by his practical labors, and his publications on massage and Swedish movements, has done much to advance the cause of mechano-therapy in America, and stands with the Taylors as a pioneer in this department.

Archibald Maclaren's *System of Physical Education, Theoretical and Practical*, is an invaluable book, and while not intended for medical purposes should be studied by every physician interested in active exercises as a means of treatment. Blaikie says truly of Maclaren, that he has done more than any-one else now living to point out the benefits resulting from rational physical exercise, and how to attain these benefits. By his individual efforts and his publications, William Blaikie himself has also done a great work for the advancement of physical culture. His book published by Harper & Bros., in 1883, and entitled *How to Get Strong and How to Stay So*, has enlisted the interest of thousands, and doubtless has lengthened or saved many a life. In 1886 appeared another little work by Blaikie, in the form of a school text-book: *Sound Bodies for Our Boys and Girls*. The exercises given in this book are clear and plain; they are arranged on a natural plan; they are safe, and but little apparatus is required for them—a few dumb-bells, a few wands or sticks, and a horizontal bar, are about all. I have found them to be admirably suited for my purpose in the treatment of some forms of nervous and mental disease.

In the *Therapeutic Gazette* for June and July, 1887, appeared two lectures by Professor Dujardin-Beaumetz, of Paris, in the first of which he considers the physiological effects obtained from exercise and movements; and in the second, after setting forth the methods of medical gymnastics, he discusses the diseases and condition in which they are useful.

A Manual of Treatment by Massage and Methodical Muscle Exercise, by Joseph Schreiber, M.D., of Austria, translated, with the author's permission, by Walter Mendelsohn, M.D., of New York, has appeared within a few months. This book treats the subject of mechano-therapy from various points of view; and in it are found explicit directions in regard to the technique of massage and its effects, and also a discussion of active movements with and without apparatus. The treatment of many nervous diseases is discussed. The book is a valuable practical treatise, and its publication will do much to advance mechano-therapy in this country; but one of my chief reasons for referring to it is because it contains an extensive chronological bibliography, which can be consulted by those interested.

I am engaged in the preparation of a book on the *Gymnastic Treatment of Nervous and Mental Diseases*, in which will be considered both general and local methods of exercise, and the combination of such methods with other forms of treatment, as for instance, with massage, electricity, hydrotherapy, and medicines.

One of my chief purposes this evening is to call attention to general systematized active exercise. I will also speak of a few special or local exercises designed for particular organs or parts. In a large number of nervous and mental cases, the improvement of general nutrition is the one thing needed to bring about relief or cure, and one of the most effective aids to this end is general, systematized active exercise. The methods chiefly adopted by me are (1) the exercises of Blaikie, with or without dumb-bells, and with the horizontal and parallel bars, or substitutes for them; and (2) exercises with pulley-weight apparatus.

I need only refer you to Mr. Blaikie's[1] best known book for a description of some of the simplest forms of apparatus; to the uses which can be made of the jambs of a door and a couple of pitchfork handles, and for the sketch of a pair of pulley-weights of excellent pattern designed by Dr. Sargent.

A. J. Reach & Co., of Philadelphia, the well-known dealers in sporting and gymnastic goods, have constructed a form of pulley-weight apparatus, which is very complete, compact and convenient.

"The Home Exerciser" of C. L. Dowd, of New York, is also convenient and useful, and has been strongly endorsed by Mr. Blaikie for its compactness, strength, lightness, etc. The apparatus of Reach and Dowd consists of an arrangement of ropes, pulleys, and weights, ingeniously put together so as to occupy but little room, and yet to allow the performance of many movements.

"The Home Gymnasium" of John E Ruebsam, of

[1] How to Get Strong, etc.

Washington, D. C., is well adapted for the office of a physician, or for hospitals and colleges. For a long time I have had this apparatus in use. It occupies more room than the apparatus of Reach or Dowd, but, on the other hand, it is in some respects more complete, having, for instance, combined with it a lounge for massage purposes, and a strong horizontal bar. An apparatus of this kind or one similar should be in every hospital which has not a complete gymnasium.

Elastic straps are sometimes used for gymnastic purposes. According to Dujardin-Beaumetz, Pitchery was the originator of this system, which he has styled "opposition gymnastics." Elastic cords with handles attached are firmly fastened in convenient places. By making tractions in different directions, they will bring out almost any muscular action. They can be adapted for the leg or foot movements, as well as to the upper extremities. Some objections, however, apply to them which are not applicable to the pulley-weight apparatus, or to the use oi dumb bells, bar-bells, etc. The force used cannot be thoroughly controlled and regulated. Blaikie[2] in describing and criticising one of the forms of parlor-rowing apparatus, has pointed out their defects and shortcomings better than can be done by myself. In spite of their defects, however, he considers them excellent contrivances, if used intelligently.

Movement apparatus run by steam has been largely resorted to in some countries, particularly in Sweden, where the method was invented and introduced by Zander. In this country, it has been used in a few institutions, as at the Surgical Institute, formerly located at Broad and Arch Streets, in Philadelphia, where I have observed its workings. The system has a field of usefulness; it has also certain disadvantages, and needs the most careful supervision, but under the strictest supervision, it may be used with great benefit. To some extent, semi-active and semi-passive or duplicated active movements may be carried out by this machinery, and it can be made to cover the whole range of passive exercises.

The same cautions and contraindications are to be borne in mind in using the exercises either with or without apparatus: probably the dangers of overdoing are to some extent greater with than without apparatus. In the prolonged treatment of patients, some advantages accrue from the use, conjointly or alternatety, of exercises with and without apparatus. The interest of variety is added, and the opportunities of the adaptation of movements to special cases and conditions are more numerous. Most of the firms which sell pulley-weight apparatus send with them printed instructions and illustrations; but I must enter a word of caution against the employment of such apparatus by invalids without special medical supervision. Much harm has come to individuals, as well as to the subject of medical gymnastics, by the use of exercises without specific directions.

To a considerable extent, I have personally directed the exercise-treatment of my patients in private practice, and in the nervous wards and the insane department of the Philadelphia Hospital. Dr. A. H. P. Leuf, instructor in physical culture in the University of Pennsylvania, and Dr. O. H. Beckman and Dr. Mary Willits, assistants in the department of the mind and nervous system in the Philadelphia Polyclinic, have, under my instructions, successfully treated patients for me.

Mr. Clinton A. Dodge, of Philadelphia, is an able and experienced instructor and expert in gymnastics. During the present year he has treated for me, with marked success in most cases, patients suffering from neurasthenia, hysteria, habit chorea, neuritis, lateral spinal curvature, melancholia, etc. Mr. Dodge has also had under his charge the patients of other physicians, and, by their permission, he has given me some of the results of his work.

The director of these exercises should be thoroughly well fittted for his work. He should not only understand the work, but he should combine discretion with enthusiasm in pursuing it. If not a physician, or if a physician without special experience in such work, the treatment should be carefully supervised by some one more competent. The treatment should be carefully individualized. The instructor or director should not undertake too much in one day; and he will soon tire and do badly with his patients if he cannot become interested.

Usually I combine respiratory exercises with the muscular movements. "On the two powers, muscular and respiratory," says Maclaren, "depends the ability to perform all bodily exercises." Inherent nervous force has also something to do with the capacity to perform bodily exercise.

Of course, in any method of gymnastics, respiration must to some extent be exercised. Breathing becomes accelerated, and even painful, under continuous active exercise. In speaking of respiratory gymnastics in this connection, however, I refer to special efforts of breathing—by taking deep, full breaths through the nose and mouth; by forced expiration, as well as inspiration; by counting with a loud voice while holding the breath, etc. It is not my purpose to refer in this paper to the use of pneumatic chambers or other forms of pneumatic apparatus.

It is interesting to recall that the most ancient of books in which gymnastics is discussed, the Chinese Treatise *Cong-Fou, the Art of Man*, speaks particularly of the importance of respiratory gymnastics. Dally and others in the present century, have maintained that respiration is the pivot of every gymnastic exercise, and systems of respiratory gymnastics have been invented (Dujardin-Beaumetz).

Want of respiratory power is certainly either at the root, or is an essential constituent of many morbid nervous conditions. It is remarkable how much individuals differ with reference to their respiratory power, even when of apparently the same muscular ability. The development of the lungs, chest walls, diaphragm, abdominal walls, and other parts; the greater aëration of the blood which is conveyed to weak spinal or encephalic centres; the greater control which the patients obtain over all nervous and muscular effort through these respiratory exercises,

[2] Op. cit. p. 101.

make them of decided value in cases in which active movements are applicable. On the other hand, it is quite possible that some harm may result from the incautious use of forced respiration. Carried on too long, both as far as giving lessons is concerned, and as far as the weeks and months during which the exercises are continued, it is even conceivable that the air-cells may be unduly strained. Great care should be taken with those who are very weak generally or in a particular part, especially in the lungs or abdominal region.

The treatment should begin with the simplest forms of exercise, and these should be constantly increased and elaborated, as the patients gain in skill and strength. It is wonderful how little some patients can do in this direction. A grasshopper in gymnastics is a burden to them. Five minutes, or even less, is sometimes all the time that can be safely taken at first, and five minutes of actual exercise must sometimes be distributed over half an hour. In most cases the time should never be allowed to exceed twenty or thirty minutes. Often it is important to give resting spells during the process of treatment. Some patients, ambitious to excel or fearing to appear weak, will certainly overdo. Individual peculiarities should be carefully studied. In the majority of cases of nervous and mental diseases in which systematized active exercises are indicated, the danger will be greater of overdoing than of doing too little.

It is an important practical matter to have the air of the room in which the exercises are performed as pure as possible. The room should be well ventilated. It is not necessary, particularly in the case of the nervous and weak, that the room should be without fire; indeed, it is sometimes better that there should be some warmth, but fresh air should be admitted to the room.

Carrying out strictly hygiene in various directions will very much assist in getting good results with the exercises. When possible it is well for the patient, soon after finishing the exercises, to take a sponge bath, with tepid or cold water, according to individual vigor. Good food, regulated exercise in the open air and plenty of sleep are, of course, important.

To illustrate clearly what is meant by simple respiratory exercises in connection with systematized muscular movements, I will quote for you from Blaikie's smaller work two of his very plain directions. I will also quote from the lectures of Dujardin-Beaumetz one of Dally's movements:

"*Directions.*—1. Stand four feet apart in the aisles, with arms folded behind you, and with one foot about eight inches in front of the other. 2. Now draw the head back and tip it as far down behind as you can. 3. Hold the chin up high. 4. Rest there a moment, then stand up straight again. 5. Repeat this exercise six times.

"*Caution.*—Breathe deep, full breaths all the time; indeed, always, when exercising, breathe slowly, and as large breaths as you can."

. . . . . .

"1. Take a dumb-bell in your right hand and hold it up high over your head. 2. Stand with the chin up high all the time. 3. Breathe a full, deep, slow breath. 4. Now slowly lower the dumb-bell, not down to your right shoulder, but across, above your head, and down over your left shoulder, as low as you can, till it touches your shoulder, letting your body tip over to the left. 5. Hold it there till you slowly count ten. 6. Now bring it back overhead again. Then do the same with the dumb-bell in your left hand. 7. Do this five times with each hand.

"Repeat this five times each day the first week, and twelve times daily after that right along."

One of Dally's respiratory exercises is as follows: He places the patient in a vertical attitude with the back against a wall, then, both arms being extended horizontally in front, the patient forcibly and slowly separates the fingers while he bends the thorax forward; he remains in this position thirty seconds, makes a deep nasal inspiration, and resumes the initial position; then makes a deep expiration, and repeats this exercise six times in succession.

Dujardin-Beaumetz, in reference to these exercises of Dally, remarks that another and simpler exercise will render much service in developing respiratory capacity, viz.: to make the patient count with a loud voice as long as he can without losing breath. Before commencing to count he should make a deep nasal inspiration.

Among the diseases of the nervous system referred to by Dujardin-Beaumetz as calling for gymnastic treatment are muscular atrophies, deformities, chorea, hysteria; ataxic, nervous, and neurasthenic persons; the victims of mental overwork and sedentary life, and idiocy. He also discusses the uric acid diathesis, gout, and diabetes, for which the neurologist is often consulted.

This paper is not founded simply upon theoretical considerations and a study of literature. For several years I have to some extent used systematized active exercises, either with or without apparatus, and during a year past I have had a considerable number of patients on this treatment. My objects, in addition to recording experience, are to call general attention to a too much neglected method of treatment, and to make certain practical suggestions which naturally grow out of a study of the subject. It will be impossible to give details of cases without dragging the paper to a wearisome length. When preparing this paper I was able to put my hands on forty-two such cases, not including those under treatment at the Philadelphia Hospital. Of these cases, twenty-five were treated by the general active exercises, some with and some without pulley-weight apparatus; the other seventeen by some local method for a special purpose. The patients treated by the general exercises included cases of idiocy, insanity, asthma, minor chorea, habit chorea, hysteria, general nervousness, neurasthenia, nervous palpitations, lithæmia, cerebral syphilis, diabetes, curvatures, ataxias and paralysis; those treated by special more or less local methods included cases of hemiplegia or monoplegia, infantile paralysis, lead paralysis, rheumatic neuritis, muscular atrophy, aphonia, and writer's or telegrapher's disease.

For the feeble-minded, for the insane, and even for

criminals, systematized active exercises can be used with great advantage. Those in charge of institutions for the idiotic and feeble-minded in France have in particular given much attention to gymnastics. It is only necessary to recall such names as Esquirol, Bourneville, and Pichery. At the Pennsylvania Training School for Feeble-minded, at Elwyn, in charge of Dr. I. N. Kerlin, I have frequently, and with great interest and pleasure, witnessed the performance of the gymnastic classes. As many as eight separate classes are instructed at one time by as many teachers; and at intervals general exhibitions are given. The classes are graded from those pupils who can only perform the simplest movements, up to those capable of elaborate and somewhat difficult exercises. At Barre, Mass., a gymnasium has been erected, and the children are thoroughly drilled and taught. The same is true of some other institutions for the idiotic and feeble-minded in this country. Much could be said, if time permitted, about the beneficial effects of regulated physical culture in idiocy. For the improvement of the general nutrition of a class of unfortunates usually deficient in this respect, as well as for their training and development, both mental and physical, systemic exercises are of the utmost value. In some of the grades of idiocy attention should be paid to individualizing the treatment by exercise. To a certain extent gymnastics can be used for diagnostic and prognostic purposes in idiocy, observation of those attempting systematized exercises determining the possibilities as to general improvement.

So far as I know, very little has been done with systematized movements in hospitals and asylums for the insane, although I believe insanity affords a great field for such treatment. In the first place, such exercises will do much toward improving the frequently deteriorated physical condition of the insane; secondly, they afford a method of calling out and improving the impaired mental faculties; and thirdly, they constitute another valuable means of supplying to the insane that which all alienists now agree is most important for them—occupation.

"One of the great improvements that has taken place in modern asylum management," says Clouston,[3] "has been that rational physiological outlets are provided for the morbid muscular energy in cases of chronic mania. They are neither confined in their rooms, nor within 'airing courts' enclosed by high walls. They are made to wheel barrows and dig on farms. They are encouraged to dance, and are well fed. Most of them eat enormously, and if they have not enough to eat they fall off, get worse in their mental state and in their habits. Many of them can be got to expend their energy in hard, regulated work, and are the very best workers on the farms and in the laundries of the asylums. They are not all, of course, furiously maniacal. Some of them simply have a slight morbid excess and exaltation of the brain convolutions, shown by restlessness, want of affection, want of self-control, but are not incoherent. If they are kept at work the most objectionable and repulsive parts of the older asylum life are avoided in a great measure, and the refractory wards, with their noise and danger, are not needed. The scenes with patients, attendants holding them down, and removing them into the seclusion of their own rooms, are few. No doubt there are risks run in the present system to patients and guardians, but I believe the risks are much less in reality than under the old system, for the patients are not so irritable, not so revengeful, and not so dangerous generally."

By means of systematized exercises the insane can be provided with an additional "rational physiological outlet" for their morbid muscular energy, on the one hand, and, on the other, with a rational physiological method of calling them out of their muscular and general torpor.

A few weeks since, in the Insane Department of the Philadelphia Hospital, I started a class in systematized active exercises, selecting eight women suffering from melancholia, and putting in with them to give zest to the treatment two other cases not mentally depressed. Sufficient time has not yet elapsed to determine how much in a curative way can be accomplished by such treatment, but already the experiment has proved to me an instructive one. I found that even these patients, plunged into the profoundest depression, could, by sufficient persistence, be aroused to the performance of some movements; others did moderately well; some very well. The difficulty of fixing the attention of these patients, and yet the possibility of doing it by sufficient effort has been clearly shown. The class has made much improvement in facility and rapidity. Small classes should be formed in large insane asylums, and the system given a thorough trial.

An instructive case of mental disease greatly benefited by systematized active exercises, is that of a young man who, at the age of 21, broke down mentally, as the result of too great output of mental energy and physical exertion in business. He became depressed, and soon developed delusions of suspicion, believing that people were watching and following him. In a few weeks, under rest, the depression disappeared; he again attempted business, but became excited, and then developed ambitious delusions. He was admitted to an asylum for the insane, and in three months came out, apparently well. In brief, his subsequent history for eight years was that every year, late in the spring or early in the summer, he had a period of excitement, followed by one of depression, each lasting about three months. About three years ago he began the use of systematized active exercises, after the method of Blaikie and others. He has since persevered with them, at the same time paying attention to diet, sleep, and general hygiene. On a few occasions he has had touches of elation, lasting only a day or two, but he has been able, owing to his increased physical and mental strength, to resist with success the beginnings of such attacks, and he has been entirely without the regular periods of depression and elevation for nearly three years.

An experiment made at the New York State Reformatory, at Elmira, has been frequently referred to of late by the medical and general press. An ex-

[3] Clinical Lectures on Mental Diseases, p. 158.

perimental class in physical culture was formed of twelve men, who for a period ranging from one to two years, had made no appreciable progress in their school work, and who seemed incapable of prolonged mental effort, yet could not, strictly speaking, be considered mentally unsound, or representatives of a class known as feeble-minded; with the object of ascertaining, if possible, if physical culture, as comprised in frequent baths and massage, and daily calisthenics under the care of a competent instructor, would not result at least in the partial awakening and stimulation of dormant mental power. Increased mental activity rather than muscular development was to be the gauge of success or failure of the experiment.

Dr. H. D. Wey,[4] physician to the Reformatory, in reporting the results of the experiment, says that to those who are thrown in daily contact with the men, a mental awakening was apparent. They became interested in their studies and strove to appear to the best advantage in the school-room. Their advancement in their studies was not steadily onward, but rather intermittently progressive. It will be interesting to note in the future, as Dr. Wey remarks, whether the good results are permanent; but whether they are or not, the step is one in the right direction, and is to be commended to penologists everywhere.

(To be concluded.)

PROGNOSIS IN VALVULAR LESIONS OF THE HEART.

Read before Chicago Pathological Society, December, 1887.

BY JOSEPH M. PATTON, M.D.,

OF CHICAGO.

The most interesting question in connection with cardiac valvular lesions, and one that requires the most accurate knowledge of the physical condition of the heart, and of the changes that have taken place, and of those which are yet to follow, is the question of prognosis.

The incurability of organic disease of the heart, confines the management of these cases to one object, namely, how long can the heart be made to perform its function? To this end it is necessary that an intelligent prognosis be made, based on the following points: *First*, The seat of the lesion and its character. *Second*, The physical changes already effected by the lesion. *Third*, The histological changes resulting from these altered physical relations.

The careful study of these questions, and of the liability to further changes, both physical and pathological, in which any or all of the above-named conditions may be factors, will enable us to make a reliable and scientific prognosis. The effect of location on the prognosis depends on the time of life at which the trouble begins, and on the character of the lesion.

In early life the mitral valve is generally the one at fault, and the lesion is most often regurgitant. This is due to the fact that mitral disease in young subjects is generally secondary to acute endocarditis, and to the high blood pressure on the under side of these valves. The prognosis in these cases depends on the power of compensation, and is better in regurgitation than in stenosis. Mitral disease at middle life, or subsequent thereto, is generally secondary to some other form of cardiac disease, and the prognosis is bad.

Disease of the aortic valves generally occurs in adult life, probably owing to the tendency toward inflammation of the aorta, immediately around the sinuses of Valsalva, during this period.

The prognosis here is better in stenosis, than in regurgitation, aside from the liability to cerebral embolism, which Niemeyer limits to cases of regurgitation, I believe that embolism is not of very frequent occurrence as I have met with only one instance, and that in a case of stenosis in a girl 12 or 14 years of age.

Second, as to the physical changes in the heart effected by the lesion. And in this connection cardiac hypertrophy is not to be considered as a diseased condition, but as the necessary and only remedy which Nature can give to a pump whose power is being overtaxed by reason of a faulty valve.

In mitral regurgitation there is first dilatation of the left auricle, but this is generally slight, as the intra-auricular pressure is not very much augmented. The increased pressure in the pulmonary circulation is immediately relieved by hypertrophy of the right ventricle, which is a simple hypertrophy, and not eccentric, as is generally stated. When this compensation takes place the prognosis is good, and remains so until the hypertrophy becomes eccentric from degeneration of the right ventricle. The muscle being no longer able to withstand the increased intra-ventricular pressure, the prognosis then becomes grave. The increased pressure in the left auricle and pulmonary veins throws the blood into the left ventricle with more than usual force, hence there is slight dilatation and hypertrophy of this ventricle, which equalizes the arterial circulation. In some cases complicated by extensive myocarditis, dilatation of the left auricle, and ventricle, may be so rapid that the patient dies before compensatory hypertrophy can be obtained. In a recent case of this nature in a child 8 years old, the heart muscle was very weak from myocarditis. The patient was very anæmic, yet under treatment the improvement was very slow, but steady for several weeks, when, after taking a long walk and overtaxing the heart muscle, rapid dilatation took place and the child died in a week or ten days.

In mitral stenosis there is dilatation of the left auricle from the increased pressure necessary to force the blood through the constriction, and though the right heart compensates for the obstructed pulmonary circulation, the prognosis is rendered more grave than in regurgitation, because of the over-distension of the left auricle, which is but moderately supplied with muscular tissue, and is unable to withstand it.

In aortic disease the left ventricle furnishes the compensating power. In stenosis, its first effect is hypertrophy of the ventricle. This fully controls the interference with the blood current, and all goes well so long as the muscle retains its integrity.

[4] Annual Report of the New York State Penitentiary, at Elmira, for the year ending September 30, 1886.

The prognosis at this stage is good, as a patient may remain in this condition for many years, totally ignorant of any cardiac trouble. Sooner or later muscular degeneration sets in, as evinced by ventricular dilatation, as the muscle is now no longer able to withstand the blood pressure, and as the dilatation becomes advanced the mitral ring is stretched, insufficiency of that valve results, and this gives an obstructed pulmonary circulation at a time when muscular degeneration prevents compensation by the right heart, therefore, as soon as mitral regurgitation occurs in these cases, the prognosis gets grave.

In aortic regurgitation the first effect is dilatation from the direct force of the reflex current impinging on the walls of the left ventricle while it is relaxed, also, from overdistension by the addition of the regurgitated blood to that normally received from the left auricle. This is followed by hypertrophy, which is eccentric. The prognosis at this stage is not as favorable as in the same stage of stenosis, that is, when compensation is obtained, for the reason that in stenosis when the hypertrophy has fully overcome the obstruction at the valve it may remain stationary so long as there is no change at the valve, or in the integrity of the muscle, while in regurgitation the distending force is constantly present, and the hypertrophy must be progressive. It is for this reason that we find such immense left ventricles in some cases of aortic regurgitation. As soon as the hypertrophy fails to arrest the dilatation, mitral regurgitation ensues, as in stenosis, but is reached in much less time, as a rule, hence the prognosis is even more unfavorable than in the same stage of aortic stenosis.

The statement made by some authors that hypertrophy of the right heart in disease of the left side, and of the left ventricle in aortic stenosis, is eccentric, I believe to be erroneous. Niemeyer claims that simple hypertrophy is rare, and only obtained in such interference with the circulation as is given in Bright's disease or chronic asthma, or bronchitis. I do not recognize any difference between the effect on the left ventricle from the increased vascular pressure in Bright's disease, and the effect on the right ventricle in pulmonary obstruction from mitral regurgitation, or on the left ventricle in aortic stenosis before degenerative changes begin.

Histological Changes.—This consists in the hypertrophy of the muscular tissue, which results from the increased nutrition to the heart muscle, as demanded by its extra labor, similar to like changes in other muscular tissues under like circumstances. I believe this to be a simple increase in volume of the primitive muscular fasciculus, and not a numerical increase as is claimed by many. This increase in volume of the fasciculus may be caused by swelling of the sarcous elements of which the fibrillæ are composed, or possibly, increase of the number of fibrillæ within the sarcolemma, if there were actual increase in the number of fasciculi, with their investing sarcolemma, there would also be increase in the number of muscular bundles with their perimysium, and after degeneration of the muscular fibre this would leave an excess of the areolar tissue of which the perimysium is composed. This I have not been able to see.

The pathological changes taking place are those of degeneration from defective nutrition, and are followed by dilatation of the organ, by reason of lessening of the resisting power of its muscle.

The interference with the coronary circulation by reason of the physical changes in the heart by atheromatous degeneration of the aorta or coronary arteries by inability of the arteries to carry enough blood to supply the increased volume of muscle, causes a fatty degeneration of the primitive muscular fasciculi. The endo-cardiac blood pressure now exceeds the contracting power of the muscle and rapid dilatation follows.

The prognosis then, in a heart that has been hypertrophied, becomes grave with the appearance of symptoms indicating dilatation, for now it is a question of only a short time until asystolism of the heart is developed, and under such conditions the heart cannot long perform its function.

A word as to the danger of sudden death from organic disease of the heart. I do not believe this danger is sufficiently imminent to warrant us in placing it among the elements of an unfavorable prognosis. There is no influence in the heart, *per se*, tending to cause sudden cessation of its action. Cerebral embolism, it is true, may cause sudden death, but this, as already shown, is not frequent.

The formation of a ventricular clot from healthy blood is not possible, except when the heart has developed asystolism, in which case the prognosis is already rendered grave, because of the physical condition of the heart. I have never seen a sudden death from organic heart disease where the diagnosis was assured and the cause of death referable to the heart. And were the actual cause known of the many sudden deaths which are laid at the door of this hardworking and long-suffering organ, I believe the vast majority would be found due to causes extraneous to the heart, probably some circulatory disturbance, or tissue degeneration of the nervous centers, causing a lack of the proper innervation of the heart. The fact at least remains, that in organic disease of the heart sudden and unexpected death is a marked exception to the general termination, and if this be true in diseased conditions, what cogent reason can be given for attributing sudden death to the heart, in persons who have never given any evidence of cardiac disease.

From the foregoing we would derive the following conclusions:

The prognosis when compensation is obtained is better in aortic stenosis and in mitral regurgitation than in aortic regurgitation, or mitral stenosis. A person with either of the former lesions, moderately severe and fully compensated for, may live 20 or 30 years and suffer no inconvenience therefrom.

In aortic stenosis intercurrent disease of the lungs is not so dangerous as in mitral regurgitation, hence the prognosis in the former is somewhat better.

In aortic regurgitation, and in mitral stenosis, the prognosis is not so good, because the eccentric hypertrophy in the former, and the dilatation of the left auricle in the latter, renders perfect compensation difficult.

The more pronunced the lesion the more grave the prognosis, in direct proportion to the increase in intra-cardiac pressure.

Double lesions at one valve, or two distinct lesions at different valves, which have begun at the same time, render the prognosis grave in direct proportion to the increased liability to dilatation of the different cavities.

SALICYLATE OF AMMONIUM FOR FEVERS.

BY D. M. WICK, M.D.,
OF NEW HARTFORD, IOWA.

Last winter, in February, I was treating L. P., a boy of 6 years, for remittent fever, the temperature varying from 102° to 103°. I began with the classical course: hydrarg. chlor. mitis to arouse the secretions, quinine as an antiperiodic, and veratrum and spts. æth. nitrosi as a febrifuge. At the close of the second day of treatment, he broke out on face and neck with a bright scarlatinoid eruption, resembling very much that of scarlet fever. The parents became greatly alarmed, fearing that the boy had scarlet fever. Assuring them that he had not, and that the eruption was caused by the powders, I continued the same treatment. The next day the eruption was still more diffused over the whole surface of body, with intolerable and incessant itching and fever as high as at first visit. For another day (the fourth) the same treatment was persisted in, only to aggravate the erythema, cause œdema of face, hands and feet, and with the itching, that had persisted from the first appearance of the quinine exanthem, made my little patient more restless and miserable. The fever had now increased to 103° morning and 104° evening. I had never used salicylate of ammonium, but thought this would be an opportunity to test its value as an antipyretic. I had read the papers of Drs. Jackson, Barnett and Sullivan. Leaving off all the former medicines, I dissolved ℥ss salicylate ammonium in ℥ij aquæ and ordered 1 teaspoonful every two hours.

I saw the patient again in eight hours, and found him with temperature reduced to 99.5°, resting quietly and sweating profusely. Continued the dose the same and lengthened the interval to four hours. Next day the temperature was normal, tongue becoming clear, eruption disappearing, and the boy feeling so well that he wanted to be up and dressed. He made a rapid recovery.

The next case in which I used the new drug was also one of remittent fever. A boy, 5 years old, had been sick nearly one week when first seen. I put him on the orthodox treatment, and continued it one week, during which time his fever was never below 102° nor above 104°. He had a hot, dry skin all the time.

I again dropped all other drugs and gave salicylate of ammonium, gr. ij, in water every two hours. In about eight hours his temperature fell to 99° and he was bathed in perspiration. Continued the dose once in four hours. Saw the case next day and found no fever, tongue clean, skin moist, and the boy in every respect improved. He had no relapse, and was soon able to be around.

May P., a girl of 11 years, had measles. The disease pursued its usual course and the eruption receded as in other cases. But the fever, which had ranged high throughout (from 102° to 104°) continued. An active diarrhœa set in, her tongue was dry and heavily coated, and sordes was on the teeth. She was now in a semi-delirious condition, with a temperature of 105°. I had no trouble in controlling the bowels with mineral acids and small doses of opiates. Despite the frequent bathing, quinine, gelsemium and aconite, the fever kept on as high as ever.

After five days of this course she was no better, save that her bowels were more quiet. The skin was dry, temperature 105°, with considerable nervous disturbance, and still semi-conscious. As the case was assuming a very serious aspect, I again resorted to the ammonia treatment. Dropping all other medicines as in the former cases, I ordered 2 grains every hour until she should sweat. The nurse told me the next morning that after giving the fourth dose she began to sweat, and by the time the fifth was to be given, her clothing was so thoroughly saturated that the time was lengthened to four hours. Her temperature was normal, pulse soft and regular, though weak, tongue moist for the first time in five days and showing evidence of becoming clean. From this time she gained rapidly without one unfavorable symptom, and in one week was up, and soon recovered.

Netta B., a frail and delicate girl of 7 years, was attacked with whooping-cough, which ran a severe course for two weeks and then, insidiously, the case took on broncho-pneumonia. Temperature rose to 104°, breathing hurried, oppression excessive, the lips and face turgid and cyanotic, pulse rapid. Gave her a mixture of carbonate of ammon., acetat. potass., syr. ipecac, and tinct. nux vomica as a cardiac and respiratory stimulant; alternating with small doses of quinine. After using this treatment four days, the fever not abating and other symptoms becoming worse, I again quit all other drugs and admininistered 2 grains of salicylate of ammonium every two hours until free perspiration occurred, which was after the sixth dose. The fever subsided, respiration became easy and expectoration abundant. The temperature did not return above 101° for several days. Although it is a peculiarity of broncho-pneumonia to lull, and give a deceptive promise of amendment, I am convinced that the remedy acted promptly in lessening the fever; for after the second and third invasion of the bronchial tree, with temperature of 104° and 105° (that after four weeks proved fatal), the salicylate of ammonium each time brought the temperature down to 101° or 101.5°

I have given this form of ammonium in other cases, but did not have the opportunity to watch its effects as in the above. In the first case reported, I was forced to seek some other remedy, from the unpleasant effects of quinine. In the second, I had not yet become interested enough in the new drug to give up the old form of medication; while in the third, I thought the little girl too dangerously sick to try new remedies. In the fourth I was desirous to test its virtues only after first using the ordinary plan of treatment.

What is there in salicylate of ammonium that arrests high fevers so abruptly? Had the quinine, in the two intermittent fever cases, neutralized all malarial poison and, when the salicylate was given, ushered in the sweating stage? Or, was it the germicidal, antiseptic and antipyretic powers of the salicylate that acted so happily? May it not have been the supplying the nitrogenous waste with the ammonia? There is a *something* in its make-up that subdues arterial tension and chemically destroys the microörganisms in the blood. Its effects seem to be as marked in one case as in another, whether malarial, measles, or whooping-cough complicated with broncho-pneumonia. Professor W. S. Haines once said to his chemistry class that he believed it possible to so perfect the science of chemistry, and so thoroughly understand disease, that we may neutralize and destroy the disturbing element in the system with the proper chemical, timely and scientifically administered. The three patients recovered rapidly, while in the one with whooping-cough the fever was greatly reduced three different times.

The drug is not stimulating, but rather depressing, and should be carefully watched when given to children in doses of from 2 to 3 grains every one or two hours, and should depression occur, use some diffusible stimulant. I have thus far used Mallinckrodt's preparation and given it in pure water, which makes a pleasant medicine that children take readily.

MEDICAL PROGRESS.

OPEN INCISION AND IMMEDIATE RECTIFICATION IN CONGENITAL CLUB-FOOT.—In an article on this subject read before the New York Academy of Medicine, on Dec. 12, DR. CHARLES N. DIXON says:

A description of the treatment of club-foot will be facilitated by a division of the deformity into the following three classes: 1. Those that can be easily reduced by manipulation. 2. Cases in which there are contractures of fasciæ and tendons. 3. Cases in which all the tissues are greatly shortened.

It is a common observation that certain cases of club-foot in young children, when handled and manipulated, can easily be placed in a normal position; whereas in other cases in which the deformity is less marked, little can be effected without the aid of the knife. It is only in this first class of cases that manipulation and fixation will lead to a permanent result. In the great majority of cases it is but a waste of time to attempt to treat the deformity without division, at least, of the tendo-Achillis and plantar fascia.

It has been my practice, previous to any operative interference whatever, to subject the foot to a thorough process of manipulation and in this way discover the amount of resistance that it is necessary to overcome with the knife, and at the same time eliminate all fibrous bands and adhesions that readily yield to the force of the hand. All who have had much experience in the treatment of talipes must have observed, that even in the infant under chloroform the clubbed foot, when pressed by the hand or other force, into the best position it can be made to assume, immediately on removal of the pressure springs back into its abnormal position. It is, however, possible by a few minutes' manipulation and pressure so to overcome the resiliency of the tissues that the foot does not readily spring back into its old position. If the foot be grasped by both hands of the surgeon and gradually but persistently unfolded and twisted into a normal position, at first it gradually yields and becomes improved in position, but soon the shortened structures on the inner side of the foot become tense and refuse to yield; it now becomes a contest between the muscles of the surgeon and the resistance of the deformed tissues. If the force be steadily continued and even increased, not by fits and starts, but continuously and persistently, the soft tissues still further yield, the bony surfaces glide on each other, and the foot assumes a position more nearly approaching the normal than would have been thought possible. If at any time during this operation there seems to be danger of fracturing the bones, the force used should be intermitted but not entirely let up. If the operation is well performed, at the expiration of ten minutes or so the elasticity of the tissues seems to be exhausted and the foot lies limp and flaccid, without that tendency to spring back which it had previously possessed. More can be accomplished in ten minutes by manipulation in this way than by ten weeks of plaster dressing according to the old method. It must be remembered, however, that only the simplest cases can be successfully treated without operation, but this preliminary manipulation should form a part of the treatment of club-foot in all its various degrees. Most cases will require at least division of the tendo-Achillis and plantar fascia, and the general rigidity of the foot should be the guide in determining the further extent to which the tendons, fasciæ, and ligaments need division.

Whenever the tense structures on the inner side of the foot prevent its unfolding and rectification, owing to their short condition, they should unhesitatingly be divided by open incision. In this way the time necessary to a cure is shortened, the tendency to relapse is diminished, and the treatment of congenital talipes is placed on a sound anatomical basis. As Dr. Phelps puts it: "More can be done with a scalpel or tenotone in five minutes than can be accomplished in weeks and often months by all the mechanical appliances known to surgery."

In the second and third classes of cases operative procedures are always necessary. As Dr. Lewis Sayre well says, "contractured tissues cannot be stretched." The distinction between these two classes of cases should be left to the judgment of the surgeon.

It should be our aim to produce rectification of the deformity, with as little operative procedure as possible. In many cases the subcutaneous division of the plantar fascia, together with one or more tendons, will be all that is necessary, and after their division the distortion can be reduced. But if after

subcutaneous division of these structures the foot cannot be replaced, it is better to perform the open operation and divide the tendon of the tibialis posticus, the internal lateral ligament, and all other tissues which offer resistance to the complete redressment of the foot, if necessary, extending the incision to a linear section of the astragalus and other bones of the tarsus.

Operation.—The method of operation is as follows: Thorough antiseptic precautions being observed, so as to secure organization of the blood-clot according to the Morris-Schede method. The foot is rendered bloodless by means of an Esmarch bandage. First, the tendo-Achillis is divided subcutaneously, and the foot thoroughly flexed, so as to overcome the equinus. Then an imaginary line is drawn from the process of the internal malleolus to the tuberosity of the scaphoid bone. Taking the middle portion of this line, an incision is made downward and slightly backward, across the inner side of the foot, following the direction of the transverse wrinkle for a distance of an inch and a half. The nerve and artery may be protected by being drawn to one side of the wound by means of a blunt hook, which is held in the hand of an assistant. The foot is gradually unfolded, and the shortened and contracted structures are divided as they present themselves and offer resistance to replacement, in the following order: skin, connective tissue, tendons of the tibialis posticus, flexor longus digitorum, abductor hallucis, flexor hallucis longus, together with the internal lateral ligament. A tenotome should then be glided beneath the skin, so as to divide the plantar fascia and the muscular structure of the flexor brevis digitorum. These tissues should be cut by a series of nicks rather than by a prolonged incision. The wound is allowed to fill with coagulated blood, and dressed with Lister's protective, sublimate gauze, and a plaster bandage. The first dressing is allowed to remain four weeks, at the end of which time the wound should be healed.

After-treatment.—After the wound is entirely healed, a water-glass shoe is applied, with which the patient is allowed to walk. The glass shoe, if it does not become wet, retains its shape for six to twelve weeks. Hausmann, of Hamburg, recommends for the after-treatment a shoe which is made as follows: The toes are thoroughly padded with cotton-wool, then the foot is covered with a woolen stocking. A strip of tin one inch in width is applied along the dorsum of the foot, in order to protect the skin when the shoe is cut off. A sole formed of stiff pasteboard is fitted to the foot, and over this another stocking is fitted. A plaster bandage one and a half inches in width is then applied to the foot, so as to form a shoe extending up to the ankle-joint. While still moist, the plaster cast is cut down the dorsum and sprung off. The shoe thus formed is thoroughly dried in an oven, and covered with leather, so as to make a shoe which can be laced up and removed from time to time.—*Medical News*, Jan. 21, 1888.

Excision of the Tongue for Epithelioma.—Barwell describes his method and its application in a recent case as follows:

The method is this. Strictly in and along the middle line an opening is made about one-third of an inch long immediately in front of the hyoid bone, through the raphé of the mylo-hyoid. The genio-hyoid and genio-hyoglossus muscles are separated with the handle of the scalpel until the deep surface of the mucous membrane forming the floor of the mouth is reached. By means of Liston's needles carried under this membrane to, or even beyond, the last molar teeth, threads are passed on each side into the buccal cavity, which in their turn draw flexible wire-twist, first into, then out of, the mouth, in such wise as to surround the base of the tongue as far back as one will. An écraseur working with this wire severs that part of the organ. Then the loop of another écraseur is passed between the teeth, pressed well down on the first incision, and divides the structures beneath the tongue.

In this way, then, I operated on August 6th, on George G., aged 47, who had a large epithelioma on the left side of the tongue, behind its middle; the induration, however, extended very far back and across to the other side of the organ. No enlarged glands could be felt. The ulcer was extremely sensitive; eating and even swallowing caused pain and trouble to him, while the very foul condition of the mouth took away all desire for food. During the operation but very few drops of blood were lost. Very soon after recovery from the anæsthetic he wrote on the slate that he was pretty comfortable. Aug. 8: there had been a copious flow of saliva and other secretions from the supra-hyoid wound. The patient daily took a large quantity of milk and beef tea, with, he says, more ease than he had done for a long time. The wound was frequently syringed and the mouth rinsed with a 1 in 60 solution of carbolic acid, and the breath was hardly at all tainted. 24th: On the 16th the man could comfortably eat finely minced meat, and had gained flesh since the last report. 30th: He left the hospital, the tongue wound being firmly cicatrized on the 27th. He was able to eat very well, and for the last ten days has been able to enunciate with considerable distinctness.—*Lancet*, December 31, 1887.

Osteotenorrhaphy for Ruptured Patellar Tendon.—In the case of a woman, æt. 60 years, who ruptured the inferior ligamentum patellæ, Ceci performed osteotenorrhaphy by a new method. When he saw the patient two days after the accident the knee was considerably swollen, there was a hard lump under the patella, and on the tuberosity of the tibia, where the tendon is attached, was a gap. Compression was tried for four days without result, and Ceci then made an oblique incision from the internal condyle of the femur to the head of the fibula. On opening the joint the capsular ligament along the whole anterior and lateral border of the tibia, including the internal ligament, was torn from the tibia, the inferior patellar ligament was drawn up and fixed by fresh, easily broken-up adhesions. After washing out with a 2.5 per cent. solution of carbolic acid, Ceci bored obliquely through the lower border of the tuberosity of the tibia, by means of his bore

for suture of the patella, carried a strong silk thread through, then 3 cm. above the site of the rupture, through the patella ligament, and tied it. Several fine sutures were carried through the ruptured border of the capsule. The skin was then sutured. No drainage. The patient recovered without fever, with perfect, functional use of the knee.—*Centralbl. f. Chirurgie*, No. 51, 1887.

AMYLENE HYDRATE AS A HYPNOTIC.—DR. AVILLES draws the following conclusions from recent trials of this drug in Riegel's clinic:

1. Amylene hydrate is a hypnotic upon whose action one can depend when a sufficient dose is given. Comparative trials have shown that amylene hydrate is stronger than paraldehyde, but weaker than chloral.

2. Amylene hydrate acts on people that are accustomed to hypnotics, though it is not necessary to give larger doses than 4 grams.

3. Sleep usually comes on quickly, and without a stage of excitation. This sleep is deep or light according to the size of the dose, though it is always easy to awaken the sleeper. When the person is awakened he is always clear, answers readily, and goes to sleep again if left undisturbed.

4. With small doses the sleep lasts from two to three hours, and with large doses from six to eight hours (the larger doses being from 2 to 3.2 grams).

5. The respiration is not changed by the drug.

6. Sphygmographic tracings taken by Riegel on different patients showed that the use of amylene hydrate does not cause any change in the pulse or blood-pressure except those that are normal to normal sleep.

7. The patients never have the bad taste and smell after taking amylene hydrate, when they awake, as they do aftertaking paraldehyde.

8. It is not known yet whether a habit is formed. But in none of the cases observed was it necessary to increase the dose after the drug had been repeatedly given.

Unpleasant secondary effects were observed in only two cases, and only three patients refused to take the drug. It was used in different internal diseases, and had an especially favorable effect in icterus and icteric itching. For these affections Eichhorst has recommended chloral, but amylene hydrate is better because it does not cause that weakened condition of the heart that chloral does. No contraindications to the use of the drug were found. In severe disturbance or trouble of the stomach clysters are recommended, and the following formula may be used: 3 grams of amylene hydrate, and 25 grams each of distilled water and gum arabic.—*Deutsche med. Wochenschrift*, No. 1, 1888.

LIGATION OF THE COMMON CAROTID IN A DIPHTHERITIC-SCARLATINOUS ABSCESS CAVITY.—SELENKOW reports the case of a girl, æt. 9 years. On the third day of an attack of scarlet fever she was taken with diphtheria, and on the sixth day there was considerable swelling of the cervical glands on the right side. After a week a large fluctuating abscess was opened by a small incision, and a thin drainage tube put into the cavity. On the third day the dressings were stained with blood, which spurted out in a stream when the dressings were removed. The hæmorrhage was arrested by pressure. The common carotid was tied in two places at the level of the cricoid cartilage and cut. There was left-side paralysis for about three weeks, which was still partial after six months, and at this time there were great weakness, chordic disturbances, and inability to concentrate the attention. The patient answered questions slowly, and stuttered somewhat. The intellect, though not brilliant before, was weak. There was no clear pulsation on the right external maxillary and temporal. The left hand was held in extreme flexion and pronation, the fingers balled into a fist, and the thumb drawn into the palm. The patient could change this position only by a strong effort of the will. During sleep the hand and fingers were spontaneously relaxed, to return to the abnormal position again when the patient awoke. A slight blow on the dorsum of the finger caused momentary extension. The muscles on the radial side of the forearm were somewhat atrophied. The left foot was turned inwards slightly, and in walking the right leg was dragged a little.—*Centralbl. für Chirurgie*, Jan. 7, 1888.

CHLORIDE OF DRUMINE.—DR. REID, the introducer of this substance to the profession, reports his use of drumine as follows:

A short time ago I had occasion to treat a severe case of sciatica. Having had a little drumine chloride on a filter paper I scraped it off, dissolved it in water, and then filtered it. I injected min. x. of the solution, and in half an hour 3j of solution (strength unknown; as the powder was mixed with filter paper, it was weak, but it paralyzed the sense of taste on the tongue). There was soon great relief, and ease of movement replaced the previous stiff back, so that the patient walked easily down stairs in an hour, when the jarring of ordinary walking formerly gave him much pain. No local or after-effects appeared, although the powdered drug was six months old.—*Australasian Medical Gazette*, October, 1887.

ANTIPYRIN IN EPILEPSY.—LEMOIGNE concludes that in most cases of epilepsy antipyrin is inert, and that the cases in which benefit may be expected from it are:

1. Cases in which epileptic seizures are induced by menstruation.

2. Cases in which paroxysms are induced by irritation of intestinal parasites.

3. Cases in which the attacks are attended by migraine.

In these cases antipyrin in doses of grm. 2 a day is superior to bromide of potassium.—*Gazette Méd. de Paris*, Dec. 24, 1887.

HYPODERMIC INJECTIONS OF CHLORIDE OF SODIUM IN COLLAPSE.—DR. ROSENBUSCH, writing in a Polish journal, describes some cases of collapse from hæmatemesis and hæmoptysis in which hypodermic injections of chloride of sodium acted most satisfactorily.—*Lancet*, Dec. 24, 1887.

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SATURDAY, FEBRUARY 11, 1888.

CHRONIC ENDARTERITIS AS A CAUSE OF SUDDEN DEATH.

A valuable contribution to legal medicine has just been concluded in the *Nordiskt Medicinskt Arkiv*, Bd. xix, Nr. 15, by DR. ALGOT KEY-ÅBERG, of Stockholm, the title of which is, in English, "Contributions to the Knowledge of the importance of Chronic Endarteritis as a Cause of Sudden Death." This valuable memoir will be published in the first number of the *Vierteljahosschrift für gerichtliche Medicin* for 1888, and will be thus more accessible to the profession.

In the first part of his paper, which is a sort of introduction, the author notes the differences in the conception of the term "sudden death" from the physiological, pathological, and medico-legal aspects, and points out the special importance of the medical jurist recognizing the various anatomical alterations of the human organism that may cause sudden death. This part of the paper contains an interesting historical review, showing the different opinions that have been held as to the nature and frequency of these anatomical alterations.

The author then considers statistically the importance of chronic endarteritis (*Endarteritis chronica deformans*, Virchow) as a cause of sudden death, as the term is understood in legal medicine. The material upon which this part of the paper is based was furnished by 852 autopsies made at the Medico-legal Institute of Vienna between June 1, 1881, and June 1, 1886, on persons past the age of 14 years that died suddenly. The following is a *résumé* of his statistical researches made in the Institute:

1. In 74.5 per cent. of all the cases of sudden death, from a medico-legal point of view, after the age of 14 years, death was caused by *endarteritis chronica deformans* in one of its sequelæ.

2. In the cases of sudden death mentioned, the sequelæ were, with rare exceptions, one of the following affections: paralysis of the heart, rupture of the heart, rupture of an aneurism of the aorta or of one of its branches outside the skull, rupture of the aorta (comprising dissecting aneurism), and intracranial hæmorrhage. Of 635 cases there was only one of embolism of the cerebral arteries; in all the others one of the causes just mentioned was the cause of death.

3. In the cases mentioned, paralysis of the heart was the cause of death in 71.1 per cent., rupture of the heart in 2.4 per cent., rupture of aortic aneurism, etc., in 8.7 per cent., rupture of the aorta in 2.5 per cent., and intracranial hæmorrhage in 15.3 per cent. of the cases.

4. The cases of natural sudden death from a medico-legal point of view, after the age of 14 years, gave the following proportions as regards the lethal causes: paralysis of the heart 52.9 per cent. rupture of the heart 1.7 per cent., rupture of aneurism of aorta, etc., 6.4 per cent., rupture of the aorta 1.9 per cent., and intracranial hæmorrhage 11.3 per cent.

5. In the cases under consideration, in which sudden death was caused by chronic endarteritis, the male sex furnished decidedly the larger number. This difference was not always so well shown as in the cases in which death was due to paralysis of the heart, or to rupture of an aneurism of the aorta. In the first kind of cases the male sex furnished 64.5 per cent., and in the second kind about 79 per cent.

6. Considered as a cause of paralysis of the heart and of sudden death from rupture of an aneurism of the aorta in the male sex, chronic endarteritis cannot be attributed to senility, since the majority of the fatal cases in these two categories of affections occur between the ages of 40 and 44 years.

7. As a rule men die from paralysis of the heart due to chronic endarteritis at a less advanced age than women, and it is strongly probable that the same is true of the deaths from aneurism of the aorta. It seems then that we may draw the conclusion that chronic endarteritis is developed, as a rule, more rapidly, and that it is more harmful, to men than to women.

8. Intracranial hæmorrhages show, to judge from the small number of cases as compared with those of

rupture of the heart and of the aorta, about the same differences in the sexes as just noted.

9. Social position and calling do not seem, as such, to have any appreciable importance in the etiology of any of the cases of sudden death from chronic endarteritis.

10. There are more sudden deaths from paralysis of the heart during the first and last three months of the year than during the other six months; the winter season furnishes the greater number of such deaths.

11. As a rule, deaths from chronic endarteritis are more frequent during winter; next in order of frequency are autumn and spring, and, lastly, summer.

There is a possibility, that the author recognizes, that the conclusions drawn from his observations may be influenced by local circumstances, and that in other places than Vienna they might be different.

In the concluding portion of his memoir the author considers the presence of chronic endarteritis in the coronary arteries and at their openings into the aorta as a cause of sudden paralysis of the heart. And it is a noteworthy fact that in 33 cases of paralysis of the heart due to chronic endarteritis, which he examinea post-mortem, in 22 there were sufficient reason for regarding the paralysis as the effect of arteriosplerotic changes in the coronary arteries or their mouths. He gives the details of 13 autopsies in which death must have been considered as caused by paralysis of the heart exclusively attributable to the arterial sclerosis in question. Particularly interesting is the account of the microscopic examinations in these cases, in which the results arrived at are at variance with the opinions generally held especially in regard to fatty degeneration of the heart. He makes five special points: 1. In 4 cases of 13 fatty degeneration and necrotic softening of the muscular tissue were absolutely wanting. 2. In 2 cases of myomalacia of the heart there was fatty degeneration of the muscular tissue in 1 only, and then only in the immediate vicinity of soft region. 3. In 2 cases the isolated trabeculæ of the left ventricle, and in 1 case one of the papillary muscles of the same part, showed fatty degeneration with coarse granulations. 4. In 3 cases, in that part of the wall of the right ventricle situated below the trabeculæ, there was finely granular fatty degeneration between the bands of interstitial fat, while at the same time, in 2 cases, smaller regions contiguous to parts of the left ventricle altered in another manner, presented the degeneration mentioned; and in the third case the papillary muscles of the left ventricle showed finely granular fatty degeneration. 5. In 2 cases only of the 13 did the muscular tissue of the heart show fatty degeneration over a greater or more general extent. In the one of these cases the degeneration had invaded the whole region corresponding to the ramification of the left coronary artery, and in the other the whole heart was invaded by the finely granular form.

A QUESTION OF PROPRIETY.

Is it proper for a medical reporter having access to the ordinary clinical lectures in a hospital, to attempt to report in full the clinical lectures of a member of the hospital staff, and furnish the same for publication, without submitting a line of his manuscript to the lecturer for his approval? Is it proper for editors or publishers of medical journals to receive and publish what purport to be verbatim reports of clinical lectures without any evidence that such reports have been approved by the lecturer, and without even allowing him an opportunity to read the galley proofs?

We are constrained to ask these questions, partly from personal interest, but more for the benefit of lecturers and editors in general. Three times in quick succession the editor of this journal has been surprised, on taking up as many exchange journals from distant cities, to find each opening with a clinical lecture by himself, reported by William Whitford, M.D. The first in order of time was on "Typhoid Fever;" the second on "Acute Pneumonia—Tuberculosis;" and the third on "Broncho-Bronchitis," for the meaning of which we shall have to rely upon the reporter, as there is no such title in our vocabulary. We are familiar with broncho-pneumonia and pleuro-pneumonia, but "broncho-bronchitis" must be one of the new discoveries. On looking over these lectures we found them excellent specimens of the work usually done by stenographers who have not the experience or skill to keep accurately the lecturer's own modes of expression, or the education and mental discipline to enable them to grasp fully and clearly the ideas conveyed by them. Consequently the so-called lectures, as they appear in print, present many omissions, many errors, many ideas or points but vaguely or imperfectly expressed, and not a few forms of expression belonging to the reporter, inasmuch as they are never used by the lecturer; all of which might have been avoided if the reporter had submitted his manuscript to the lecturer for his correction and approval, or even if the editor had allowed him a glance at the proof sheets. We hope our editorial brethren will give the two questions we have asked a thoughtful consideration.

EXPLANATION.—Early Sunday morning, February 5, a fire occurred in the two upper stories of the building in which THE JOURNAL printing-office is situated, from which the property belonging to THE JOURNAL received no material damage, although the windows of the room were broken and the room flooded with water, causing the interruption of our work for a day or two, in consequence of which this number appears with four pages of reading matter less than the full complement. We preferred this much shortage to any delay beyond our uniform day of issue.

THE KANSAS STATE MEDICAL SOCIETY will hold its next annual meeting in Representative Hall, Topeka, May 1, 2, 3, 1888. The opening session will commence at 8 o'clock, P.M. Members and their wives will be passed over the railroads for one full fare going and one-third fare returning. A full programme of work has been prepared. Further information can be obtained from the Secretary, J. E. Minney, M.D., Topeka, Kansas.

THE ILLINOIS STATE MEDICAL SOCIETY will hold its next annual meeting in Rock Island, commencing at 10 A.M., May 15, 1888. President, Wm. O. Ensign, Rutland; Secretary, D. W. Graham, Chicago; Assistant Secretary, Geo. L. Eyster, Rock Island.

LONDON MEDICAL RECORD.—The proprietorship of this valuable journal has been changed, and it is to be continued, with its name changed to the "London Medical Recorder."

SOCIETY PROCEEDINGS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, January 11, 1888.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. CHARLES K. MILLS read a paper on

THE TREATMENT OF NERVOUS AND MENTAL DISEASE BY SYSTEMATIZED ACTIVE EXERCISES.

(See page 162).

DR. HOWARD A. KELLY said: Some six years ago, while living in Colorado, a friend and myself followed the directions contained in Blakie's book very carefully. My friend was consumptive and has since died. In spite of the condition of his chest he was able in one month to add a full inch to his chest-capacity. I was practicing at the same time, and succeeded in adding three fourths of an inch to my own. This gain was distinctly in chest-capacity, and due to increased development of the muscles.

I think that Blakie's great merit lies in the extreme simplicity of the exercises directed, many of which consist in simple rhythmical movements of the body. Among his most elaborate apparatus for room exercise is a single bar placed between the jambs of the door. We should, I think, bear in mind that gymnastic exercises are but the substitute in city life for what people get naturally in the country.

A most important point is one to which Dr. Mills has referred, that these exercises should be carried out in a medium of fresh air, and not in the superheated air of a furnace-heated house.

A word with reference to respiratory gymnastics. When in Rostock with Professor Schatz I had some interesting discussions with him upon the subject of intra-abdominal pressure, and he suggested a series of questions. One was, "In which case is the *intra-abdominal* pressure the greatest, when lifting a bucket of water with one hand, or when lifting two buckets with both hands?" I said that it was greatest when lifting one bucket with one hand, for then we make a column of the *abdominal* muscles on the opposite side, and necessarily increase both abdominal and intra-thoracic pressure; while in the second case, the strain comes upon the muscles of the back, and pressure is not increased. The keynote to the application of this subject to nervous diseases must be this, that deficient innervation is due to deficiency and irregularity. In the circulation, and improvement of the circulation is what is accomplished by gymnastic exercises.

THE PRESIDENT said: I have long been interested in movement cures, and can recall an interesting case which was under my care in 1860, while a resident at Blockley Hospital. A poor wood-sawyer had lost the use of his lower extremities as the result of exposure to cold. Not many months previously Dr. Fayette Taylor, of New York, had explained his method of resistance movements to me, and I determined to try them on the right leg of this man, so once or twice a day I caused the man to try to move his leg against resistance, and moved it myself against his attempts at resistance. Some weeks later when I was showing one of the attending physicians the improvement which had been produced in the right leg, the patient suddenly said, "Doctor that is your leg, now look at mine," and throwing off the cover he kicked his left leg vigorously. Finding the benefit to the right leg so great, he had quietly practiced on the left leg on his own account, and had done much better with it.

DR. BENJAMIN LEE said: It is now about ten years since the lecturer of to-night published a lecture in which the views expressed this evening, and to which we have all listened with so much profit, were somewhat tentatively held. It is gratifying that after this lapse of time he can come forward and substantiate what he then held in a partially theoretical way.

The treatment of nervous affections by gymnastic

exercises naturally divides itself into two branches: the treatment of functional, and that of organic disease. In regard to functional troubles, I have always felt that the nerves on the whole are the best behaved parts of our economy; that all they want is good feeding. When a nerve misbehaves it is because it wants nourishment. Not that the patient may not be putting enough food into his stomach. He may be gorging himself, and yet the nerves may not receive a supply of nourishment which is of the proper quality, and adequate to the demands made upon them. I believe that in the muscular system we possess the great lever to act upon nutrition, and if we make use of the muscular system intelligently, we can, in the majority of instances, supply to the nerves their needed nourishment, and in that way overcome the functional nervous disease.

My own experience with the use of active exercises alone in the treatment of such cases has been limited. I have always combined with it massage and duplicated movements—that is to say, those in which the operator either makes a movement which the patient resists, or resists a movement which the patient attempts to make. The form of exercise in which the operator makes a movement which the patient resists gives us one of the most powerful means of acting upon nutrition. It is what we may term a duplicated excentric movement, or if the term be allowed, an excentric contraction. By a concentric contraction of the muscle we understand that which every muscle makes in an ordinary movement, in which the muscle cell contracting in the direction of the axis of the muscle, the latter is in consequence shortened. By excentric contraction we understand an effort at contraction on the part of the muscle in which the operator uses a greater force than the patient, and the muscle is really elongated instead of being shortened. In this way, the nervous energy of the patient is directed most energetically to the muscle, and yet at the same time, as it is elongated, we are inviting into it an increased supply of blood.

The lecturer has referred to the danger of these exercises being carried to excess. This is particularly true where the exercises are carried on in classes. It is essential in carrying out this treatment in nervous cases that each case should be treated singly on its merits.

When we come to the treatment of organic nervous affections, my experience has been that in the early stage of the disease at least, very little should be done in the way of active exercise. We should rely upon massage and passive exercise. Later, active exercise should be given in the way of carefully regulated duplicated movements. Another important point is with reference to the early use of exercise in all forms of paralysis, and especially in infantile paralysis. I believe that there are hundreds of crippled children and crippled adults going about, who, if their cases had been undertaken in the way described by the lecturer, as soon as the slightest trace of muscular power could be observed, would now be able to walk and have the use of their limbs.

DR. S. S. COHEN said: Dr. Mills has referred to the use of exercise in the treatment of criminals. I presume that he means more especially the criminal insane. It may, therefore, not be irrelevant to quote the views of Dr. B. W. Richardson in reference to the prophylaxis of criminal insanity, or if these be too strong words, the rectification of the inherited moral obliquity which, conjoined with ignorance and misery, leads to law-breaking, by teaching those predisposed to a life of crime, to use their muscular and nervous energies in useful pursuits. He would make the prospective forger an engraver, the prospective burglar a blacksmith or a locksmith, and so on. The arguments advanced by Dr. Richardson can be found in a recent number of the *Asclepiad*, and are worth reading. He calls attention to the high importance of this subject by illustrations from the reformatory schools. He states that children who were unruly and could not be kept in order, have been rendered docile and obedient by having their nervous energies liberated in regular gymnastic exercises at such periods as experience has shown that disorder is most likely to occur.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, October 26, 1887.

VICE-PRESIDENT, DR. D. S. LAMB, IN THE CHAIR.

DR. BURNETT presented a

PIECE OF BONE DISCHARGED FROM THE EXTERNAL EAR,

and said: As the question of cerebral abscess following affections of the middle ear comes up for discussion to-night, I have thought it would be interesting to present a specimen and give the history of an interesting case. In November, 1882, Dr. Busey requested me to see a young woman with an affection of the middle ear and facial paralysis. I found her suffering from inflammation of the ear and facial paralysis of several month's standing. On examination I found the auditory canal filled with polypi. The polypi were removed in the presence of Drs. Busey and Adams. The facial paralysis soon disappeared. The treatment was continued for several months and a number of polypi were removed. Dilute alcohol was used to the granulations. The treatment was discontinued for three or four months when she returned with the ear full of granulations. I did not act so promptly and the symptoms were more difficult to subdue. In about eighteen months I removed a small scale of bone one-half centimetre in length by two millimetres in thickness. She then went to office. She had scarlatina in childhood. In the autumn of 1884, she was attacked more violently than before, the attack lasting two or three weeks. He scraped the middle ear; the temporal bone was exposed and rough, but there was nothing to remove except the granulations which sprang up rapidly. He scraped every week or two but found nothing to remove but the granulations. She became worse through the winter until March when symptoms of pyæmia developed. Dr. Busey agreed with him in the diag-

nosis. There was neither pain nor redness over the mastoid. They thought there was pus in the mastoid cells and called on Dr. Thompson who drilled but could find none. The disease went on for four or five months without any decided improvement. At times he would shake the bone but found nothing loose. He could not tell the amount of disease in the temporal bone. There were signs of improvement when she determined to try the mind cure. She remained under it during the fall and winter of 1885, and seemed to become very much better, but she kept on syringing the ear. In the spring of 1886 her sister removed the piece of bone presented from the external meatus. The discharge stopped and the morbid process apparently ceased. It is impossible to tell what the specimen is, but he thinks it a part of the semicircular canals. Her intelligence is up to the average.

CEREBELLAR ABSCESS DUE TO DISEASE OF THE EAR.

DR. JOS. H. BRYAN, in opening the discussion said, I think in opening the discussion on an important subject like the one we have for this evening, it will be of greater advantage to the Society to give a synopsis of the advances in the pathology and treatment of abscesses of the brain resulting from middle ear disease, rather than to relate my own limited experience.

I am glad that this Society has had an opportunity of having its attention directed to the evil effects of this too often neglected disease—suppuration of the middle ear. The chronic inflammations nearly always result disastrously, if left to take care of themselves, in either one or more of the three direct sequalæ: meningitis, phlebitis and thrombosis, and abscess of the brain. With these facts standing as prominently before us, why is it we meet with so many of these neglected cases? In the beginning it requires very little attention to check a mild case of otitis media; indeed the inflammation occasionally subsides like magic. Notwithstanding this we occasionally meet with cases which have never received any attention and allowed to become chronic, interfering with the patient's comfort and endangering life.

That secondary diseases of the brain arise from otitis has been known for a long time; according to Schwartze, since the time of Avicenna and Morgagni. It is, however, due to the researches of such men as Toynbee, Sedillot, Virchow, Frolich and Schwartze, of our own time, to establish the different ways by which inflammation can extend, and the different forms of disease that can be developed thereby.

The extension may take place from an acute otitis, but it is generally due to the chronic form of inflammation. At times it is very difficult to discover the path of the inflammation, especially when there is no caries present, or congenital opening between the tympanum and cranial cavity. In this connection the relation of veins and sinuses to the petrous is very important, as is also the fold of the dura mater which extend sdown into the squamo-petrosal suture of the tegmen tympani. The inflammation may extend to the labyrinth through the fenestra ovalis and rotunda. Once having reached the labyrinth it can easily extend along the course of the facial and auditory nerves through the porus auditorious internus. Probably the most common path is by direct extension to the membranes, producing a septic lepto-meningitis, and thence to the cortex of the brain. The veins which drain the posterior part of the tempero-sphenoidal lobe empty into the superior petrosal sinus, and the septic matter which is absorbed by the sinus can be taken up by these veins and by a so-called retrograde phlebitis carried to the interior of the tempero-sphenoidal lobe, thus giving rise to those cases in which the abscess is separated from the petrous bone by healthy brain tissue.

Cerebellar abscesses generally result by means of caries and localized meningitis, as occurred in Dr. Smith's case.

According to Schwartze, about one-half of all abscesses occurring in the brain are due to inflammation of the middle ear. This is a higher per cent. than that given by Lebert and Myers—which I believe is about one-third—but I think as the pathology of the disease is being better understood that Schwartze's figures will be found nearer correct. The abscess may be found in either the spheno-temporal lobe, or is sub-dural in the cerebellum. The sub-dural is probably the most frequent, and the cerebellar the least so.

Toynbee believed that the localization of the abscess depended upon the part of the bone affected; but this does not always follow, as has already been stated, the seat of the abscess may be some distance from the bone, and separated from it by healthy brain tissue.

From numerous observations made in the post-mortem room, Mr. Barker, of London, is led to locate the abscess either over the roof of the tympanum, close to the squamo-petrosal suture, or on the posterior surface of the petrous bone; and in some cases it extends from one to the other of these spots. Hence, he concludes that the abscess is usually found in the middle, or posterior part of the tempero-sphenoidal lobe, and that nine-tenths of them will be found to lie within a circle with a radius of three-fourths of an inch, whose center lies one inch and one quarter above and at the same distance behind the center of the auditory meatus.

When the cerebellum is the seat of the abscess it is usually found in the anterior and outer part of the lobe, just back of the posterior surface of the petrous bone.

Although experimental physiology is rapidly locating the cerebral centers, I think they are not so firmly established that we can rely upon their disturbance in all cases to the exclusion of the general subjective symptoms, but they are of very great value when taken in conjunction with the general signs. Owing to the inconstancy of the subjective symptoms we frequently find it very difficult to make a diagnosis, and much more so to locate the abscess. It is not an uncommon occurrence for the abscess to remain latent for a long while, to break out only upon the receipt of a blow on the head, a fall, or after some undue mental strain. During the latent period there may have been no symptoms pointing to the

brain lesion. What are we to rely upon to make our diagnosis? It is only by carefully considering all the symptoms, both general and special, that we can hope to come to any definite conclusion. Headache is not of much value as a symptom of localization, for it frequently happens that the abscess is in an entirely different part of the brain than that indicated by the pain. Diplopia and optic neuritis, when present, are of value—for the latter symptom is frequently wanting. The temperature, which runs up to 102° and 103°, accompanied by rigors, to fall later on to subnormal, is a valuable sign. The pulse is generally slow. Mr. Barker calls special attention to this subnormal temperature, which was much lower in the evening in his cases. The above-mentioned symptoms, together with the frequent nausea and vomiting, and what special signs there may be present, especially following in the wake of a chronic suppuration of the middle ear, we can in most cases come to a definite conclusion. When the abscess is associated with meningitis, or phlebitis and thrombosis it is impossible to make a diagnosis.

The prognosis of abscess of the brain is far more favorable than it was formerly, and we have something more to do now than simply to make our diagnosis and wait for the autopsy to confirm it. Through the labors of M. Lucas-Championiére and Mr. Victor Horseley, the skull has been mapped out and such definite directions given that we can enter the cranial cavity and open an abscess of the brain with almost as much safety as one occurring in other portions of the body. Before treating the abscess let us direct our attention to its cause.

It is an unfair reflection to cast upon otology to say that the advances made in the treatment of abscess of the brain has been greater than those for the treatment of its cause—chronic suppuration of the middle ear. We are to-day able to cure a great many of those chronic cases which a few years ago were pronounced hopeless. When the inflammation does not subside under mild treatment, then radical cure or Schwartze's operation should be done, and the parts can thus be kept perfectly drained so that the possibility of sepsis is greatly diminished. If the disease has advanced and the abscess formed, then the skull must be opened, at the same time keeping up the drainage from the ear.

The great questions to be decided in operating for abscess of the brain are when and where to apply the trephine. The first is answered by applying the trephine as soon as we feel convinced that there is an abscess, and not to wait until the vital forces become exhausted and the patient is in a comatose condition. Knowing that nine-tenths of the abscesses are to be found in what is called the "dangerous area," we would naturally apply our trephine somewhere in the circle described by Mr. Barker, if we decide the case to be a cerebral or subdural abscess. If it is situated in the cerebellum the rule is to draw a line from the post-occipital protuberance to the tip of the mastoid process and apply the trephine at the middle of this line. By this means there is no danger of entering the lateral sinus. Horsley insists that the old crucial incision should be abandoned for the flap operation. Great stress is laid upon the fact that the flap must be so outlined as to preserve in its attachment either the superficial, temporal or occipital arteries. As regards the reflection, it has been customary to reflect the periosteum as a separate layer; but this has an obvious disadvantage in that the membrane is easily torn and lacerated. This is obviated by reflecting it in continuity with the rest of the flap.

The incision for the flap in cerebellar operations should be a curved one, commencing at the post-occipital protuberance running downwards and terminating at the apex of the mastoid process. If it had been possible to locate the abscess in Dr. Smith's case, I think it would have been a favorable one for operation. It would be interesting to know the damage to the petrous bone. It seems almost impossible that so much destruction of the interior of the bone could take place with no other symptoms resulting than those given in the record of the case.

DR. BURNETT: This is a very interesting question, and it only needs somebody to start the subject, so he would offer a few thoughts. The main question is respecting the treatment; and, with due deference to general surgery, there has not been much advance made in treating the complications of inflammations of the ear. They should be treated early. The general practitioner orders the usual treatment for otitis and the discharge ceases. The ear is washed out, but the disease is going on all the time. The mucous membrane is thickened and inflamed. There is loss of nutrition and disease of the bone. The healing power is lost. Patients must be treated early and watched for months afterwards. There is a return upon the slightest exposure, showing that the disease was not cured. The physician does not always see these cases. His case has taught him a lesson in bone surgery, so that if there is necrosis in that locality he will let it alone. The operation for mastoid abscess is more frequently performed than formerly. At the last meeting of the Otological Society there was an unusual number of specimens presented. The journals are giving numerous deaths. If you empty the cerebral abscess do you cure the meningitis?

DR. REYBURN: The last three cases I had were in the same family, and two died. A girl, 17 years old, had scarlatina which was complicated with meningitis; there were evidences of pus within the cranium and he wanted to operate, but the family would not allow it and the patient died. The next year a boy of 20 was similarly affected. He was about to operate when the patient was taken with convulsions and died. The third death was from the use of a nasal douche which caused inflammation of the middle ear and meningitis, and the patient died. We should impress parents with the gravity of diseases of the ear and the importance of early treatment. They usually consider that these diseases are natural accompaniments of teething, and that they will get well of their own accord. He has found boracic acid to excel all other remedies. It will cure when the inflammation does not extend too far.

DR. HERMANN: Although it had not been his

good or bad fortune to have to make a post-mortem examination in a case of his own, he has had occasion to see quite a number of them during his hospital practice. He has seen many cases of purulent otitis media cured by timely treatment. When neglected cases come into our hands and we find the bone denuded, we might at first try Wilde's incision, which sometimes is sufficient; but, as a rule, the original seat of the trouble being located in the mastoid cells, the opening of the mastoid bone either by chisel or trepan is indicated. The longer we hesitate the more chance there is for the development of a cerebral or cerebellar abscess. Cases of this kind usually follow in the wake of measles, scarlatina or diphtheria. He has had occasion to observe, in post-mortem examinations of children dying of a complication of scarlet fever with diphtheria, that the tympanic cavity is filled with a kind of pseudo-membrane or exudation. This diphtheritic affection of the middle ear is not always diagnosticated and the patients, in some cases, gradually recover apparently without there being any attention, perhaps, to the very slight symptoms indicating trouble in the middle ear. If they have a good constitution they may get entirely well; but if the scarlatina or measles is followed by a long convalescence and general debility, then the ear trouble is sure to show itself. The residuum of the exudation in the middle ear is not resorbed readily, and forms a nucleus of inflammation which results in perforation of the drum and consequent purulent discharge. If this discharge is fetid it is significant of affection of the bone. Frequently, when the bone is laid bare, it can be seen or felt quite easily after the ear has been thoroughly washed out—of course with a disinfecting fluid. But if the caries is located in the mastoid cells—and this is frequently the case—we have to rely on other data for our diagnosis. Fetor, constant headaches, pain on tapping the mastoid bone, fever and a number of other symptoms will soon enable us to make our diagnosis certain. By performing Schwartze's operation on the processus mastoidous, by which he has saved many lives, we establish a free communication with the parts affected, and allow the pus accumulated in those cells to escape instead of letting it work its way towards the brain. If we should not find any accumulation of pus, but little harm is done by the operation. If the bone is affected we should always operate and give the patient a chance.

Dr. Burnett was misunderstood about the operation which he meant to be applied to abscess of the brain. Many men are opposed to operative interference and perforation of bone; and others cure without operation. He believes in cutting into the mastoid, and in his case he went into a healthy mastoid.

Dr. Reyburn: There is but little danger in trephining, and he has never seen a death from the operation; they die, but not from the trephining. He saw two of the cases operated on by Victor Horsley. When he reached the dura mater there was nothing unusual to be seen, so he cut into the brain and found the tumor imbedded in its substance. The operation was performed for epilepsy, and he saw the man walking about the ward, and learned that there had not been a return of the attacks.

Dr. J. Ford Thompson has had considerable to do with brain and ear surgery. Trephining in itself is simple enough; the questions are where to trephine, the diagnosis and the prognosis. Years ago the practice was very common as a means of searching, but the results were unfavorable. He hesitates, not to trephine, but to locate the abscess. Some time ago Dr. Busey and himself saw a case with Dr. Prentiss. A man 40 years old had earache which was followed by symptoms of pyæmia. He died, and the post-mortem revealed an abscess of the petrous bone which had ruptured into the lateral sinus. In Dr. Burnett's case he opened the mastoid cells, but did not find pus. No surgeon would think of taking out the walls of the auditory canal. Trephining will open the abscess and prevent its extension in the opposite direction. Dr. Smith only saw his case just before death, and it would have required nice diagnosticating to have made out the condition. An operation would not have benefited him, nor would statistics encourage such an operation. He will open an abscess anywhere he finds it. Wonderful operations are being performed within the skull. Dr. Weir recently removed a tumor from the cerebellum, but the patient died. Durante diagnosticated a tumor in the cerebrum over the orbital plate. He opened the side of the skull, elevated the frontal lobe and removed a tumor the size of an egg, and the patient recovered. If there is a guide to the seat, as pain, paralysis, aphasia and facial paralysis, we can apply the trephine near enough. When the disease is in the interior of the brain substance we have no such guides. The practice of cranial surgery is attended with frightful mortality. He recently saw a case which had received a blow months before; he soon lost interest in his business, and very soon coma came on. He diagnosticated abscess of the brain, and the post-mortem confirmed it. This was a case for operation if the diagnosis had been made earlier.

Dr. Godding had some instructive statements of autopsies of the insane which were wide of their mark. In children it is for the general practitioner to diagnosticate these affections: they only come to him with the sequelæ: that is, inflammation of the brain following scarlatina. They are not cases of abscess of the brain going to a fatal termination. Dr. Blackburn has informed him that he has not seen a case of abscess of the brain. We have seen tumors which he could not recall. In one case the tympanum was perforated when the man was comatose, but pus was not found; he died either from abscess or meningitis, which could not be verified, as a post-mortem was not allowed. A case of chronic mania of sixty years' duration, in which there were delusions and fantasies, but no paralysis nor sexual disordered function, was found dead. A soft tumor was found in the cerebellum. He had gone about without any of the usual evidences of such pathological conditions. In 1,300 deaths the absence of abscess of the brain would indicate its comparative rarity.

Dr. Smith: To differentiate intercranial abscess

from disease of the internal ear is usually very difficult. There may be a discharge from the ear, the pus and detritus passing one way and the inflammation the other. He has had three cases die from ear trouble. In one with disease of the middle ear the patient died comatose. In the next there was a discharge from the middle ear and extensive cellulitis of the neck. He opened the mastoid, but the patient died. In the last there was an abscess of the brain from ear disease. In another case the physician had told the family that the patient had pneumonia. The man died and the family were incensed at the first doctor. The autopsy revealed an abscess of the brain and also pneumonia. Dr. Prentiss reported a case in this Society. The discharge from the ear had ceased. Dr. Thompson aspirated the liver, but did not find pus.

DR. BUSEY desired to correct some misstatements in regard to the case reported by Dr. Prentiss. There was no dispute in regard to the existence of an abscess, but its location was not definitely determined. The man had had one or two very severe rigors daily, attended with a fever varying from 105° to 106°, and a constant pain with acute exacerbations in the region of the lower lobe of the right lung. There was a history of ear trouble, but at the time there was no symptom which directed attention to it. There was neither a discharge from the ear, nor any swelling or tenderness about it, nor any brain symptoms. The constant and violent pains at the base of the right lung, together with marked circumscribed dulness extending above the liver surface, suggested a possible abscess of the liver pressing upwards into the thoracic cavity. For this Dr. Thompson aspirated, but failed to find any pus in the liver. The autopsy revealed an abscess in the brain, and a condition of the lower lobe of the right lung which was believed to have been caused by numerous emboli. It is not impossible that a similar condition of the lung was present in the lung of the patient referred to by Dr. Smith, and that the physician who made a diagnosis of pneumonia may not have been far away from the fact.

CHICAGO GYNÆCOLOGICAL SOCIETY.

Regular Meeting, Friday, November 18, 1887.

THE PRESIDENT, HENRY T. BYFORD, M.D., IN THE CHAIR.

THE PRESIDENT presented a

FIBRO-SARCOMA OF THE UTERUS AND BROAD LIGAMENT.

This specimen of the fibro-sarcoma of the uterus is interesting, as having been obtained by one of the most difficult hysterectomies on record. I have the following notes of the case:

Mrs. E. W., American, aged 40, widow; had been married twenty-two years, having borne four children, the oldest twenty years of age, the youngest twelve years old. Four times since the birth of her last child she had miscarried at the third month. Her present illness began six years ago, when she discovered an enlargement in the left inguinal region. There was no pain connected with it, but the last miscarriage, three years ago, was extremely painful. After recovery the pain in the left side subsided. One year ago the growth began to increase in size, and has grown very rapidly since. There was dull, heavy pain through the pelvis. Two months previous to this time an exploratory incision was made and a diagnosis given of fibroma of the uterus, with numerous pelvic adhesions. The surgeon did not think its removal practicable. On August 4th I removed the tumor. The operation was begun at 3:15 P. M. and completed at 7:15 P. M. The tumor, including the uterus, was about the size of a man's head. I found the whole anterior surface of the omentum firmly adherent to the abdominal wall above, and the tumor beneath, making it almost impossible to get at the tumor, and certainly quite impossible then to made an ordinary exploratory incision. It required about three quarters of an hour to get the omentum, whose veins were as large as goose-quills, ligated so that I could free it from the surface of the tumor. After enlarging the incision, I found a little space on the right where there were no adhesions. All over the left side the small intestines were adherent, lying flat on the surface, while above and on both sides the colon, throughout its whole length, lay as if plastered upon the tumor. Large blood-vessels could be seen running from the bowel on to the tumor. If I could have lifted the tumor sufficiently to put an elastic ligature about the uterus I might have quickly enucleated it, but I could not stir it from its bed. It was a sarcoma that did not easily admit of enucleation, and bled profusely from the slightest wound. The patient was anemic, had already lost some blood, and had been under ether for some time. But I had to go on, for I did not dare to close the incision with the already disintegrated surfaces free in the abdominal cavity. So by ligating dozens of places, cutting between some ligatures and enucleating under others, I finally got the tumor so that I could raise it a very little. Over two hours were thus consumed before I succeeded in freeing it above and tying the ovarian vessels of the left side. I then rapidly enucleated far enough down to apply an elastic ligature, using all of my hemostatic forceps in stopping bleeding points. But the uterus had grown into the broad ligament and was firmly attached to the pelvis, so it could not be enucleated out of its vascular surroundings, but had to be ligatured at and against the pelvic brim on the left. The pedicle, as you see, was about the size of a man's thigh, and is traversed on one side by the enlarged uterine cavity. It was treated by Hegar's extra-peritoneal method. The patient died forty-three hours after the operation of exhaustion. The greater extent and vascularity of the adhesions, as compared with fibroma, were well illustrated here. The absence of menorrhagia in the history of the case corresponds with what is more often noticed in sarcoma.

DR. ETHERIDGE.—Will you tell us how you freed the colon from the tumor, and whether the bladder was implicated?

THE PRESIDENT.—The bladder was not implicated. In freeing the colon I took stitches through the capsule of the tumor and ligated separately the large vessels on the other side and cut between them. In some cases I used hemostatic forceps on the tumor side, in others I enucleated.

DR. J. SUYDAM KNOX read the following report of

THREE PELVIC PRESENTATIONS, WITH DEEP LACERATION OF THE PERINEUM.

The three cases of breech delivery here reported occurred in close sequence in my private practice. Being unusually severe labors, and having certain points in common, they impressed me as being worthy of report. Taken collectively, they suggest discussion as to the management of labors with this presentation.

Case 1.—Mrs. W., American, æt. 26, primipara, was taken with slight labor pains 4 A. M., May 7th, 1887. At 2 A. M., May 8th, Dr. Colton was called and found the breech presenting, S. L. A. As the os was but partially dilated, and the pains extremely irritating, he administered opium and chloral. Rest, with gradual dilation of the os was thus obtained for the next twenty-four hours, when I first saw the case. Finding the membranes unruptured, and the os still not sufficiently dilated, the breech not being engaged. I advised non-interference and a continuance of the opium per rectum.

At the end of twenty-four hours I was again sent for. Water had been escaping for hours, the breech rested on the perineum, the patient was exhausted by seventy hours' labor, and the fetal heart could not be heard. The doctor had made long and faithful efforts to assist the delivery, but the body was apparently impacted in the pelvis and would not advance. With great difficulty I succeeded in bringing down a foot, and at length delivered a lifeless twelve-pound boy.

The after-coming head caught in the superior strait and its extraction with forceps caused a laceration of the perineum to the right side of, and beyond, the anal sphincter. The soft parts were so swollen and contused that immediate stitching was deemed unadvisable.

The perineum was partially repaired by granulation during a tedious convalescence of five weeks. Secondary operation will be required.

Case 2.—Mrs. M., a stout young Bohemian, æt. 22, fell in labor with her first child the morning of May 13th, 1887. Dr. Michelet in charge. The first stage of labor was tedious and extremly painful. The membranes ruptured at the end of twenty hours. For three succeeding hours pains were severe and expulsive, when the patient became exhausted and labor ceased. Dr. Nelson was called in and advised stimulants, quinine and opium. The patient slept several hours, awoke refreshed, and the pains returned with strength and regularity. Thirty-nine hours from the commencement of the labor Dr. Nelson was again called in and I was requested to meet him. We found the breech resting on the perineum, the body firmly impacted in the pelvis, and the child dead. Persistent efforts at extraction had been made, leaving the vulva bruised and swollen and the perineum rigid. The patient having been put under ether at the request of the others, I engaged a blunt hook in the anterior groin of the fetus and gradually succeeded in extracting the body. The forceps were then applied to the after-coming head. Its delivery caused a laceration of the perineum through the sphincter, and about one inch up the recto-vaginal septum. The weight of the child was ten pounds.

Under the most disadvantageous circumstances Dr. Nelson successfully closed the rent, using three silver sutures in the septum and four in the perineum.

Antiseptic post-partum treatment was adopted, but the patient had septic fever. On the eighth day feces escaped per vaginam. Examination revealed no union, and the stitches were removed. The patient was four weeks in bed. For two months she was confined to the house. She has but little control of the rectum to-day.

Case 3.—Mrs. F., a robust American woman, æt. 36, was confined four years ago, in New York, with her first child. After several hours of distressing labor a dead and mutilated child was instrumentally extracted. I could not learn whether craniotomy was practised or not. On the morning of June 24, 1887, I was called to attend her in her second labor. I found the vertex presenting high up L. O. A. The first stage of labor lasted thirty-six hours, when, the os being fully dilated, I ruptured the membranes. Hard expulsive pains succeeded for three hours, when, finding the head did not engage, I attempted the high application of the forceps.

The blades were introduced and locked without difficulty, but each attempt at traction caused them to slip backwards over the crown of the child. Owing to the great obliquity of the head, this always occurred in spite of extreme depression of the handles and downward traction. Anesthesia was then produced, the hand introduced, and podalic version easily accomplished.

The after-coming head became impacted in superior strait, requiring the forceps. Fifteen or twenty minutes passed before it could be disengaged and delivered. By depressing the handles of the forceps between pains I succeeded in getting some air to the child, and thus finally delivered it alive. Weight of child, twelve pounds.

My best efforts could not save the perineum, which was torn through the anus and one inch up the recto-vaginal septum. After the delivery of the placenta, I repaired the laceration with two deep silver sutures. The upper stitch was inserted on a level with the lower vaginal commissure and passed entirely around the recto-vaginal rent. The second stitch closed the perineum above the sphincter ani. The rectal sphincter not having been repaired, the condition of the patient was similar to that after operation for anal fistula. The stitches were removed on eighth day, finding the perineum healed. The patient was up and about in two weeks, appar-

ently as well as ever. October 13th, the rectal tear not fully healed, but sphincter under full control. My impression is that no further operation will be required.

In reviewing these cases I was impressed with the danger to the fetus in delay of delivery after the membranes have ruptured. Until then, breech presentations should not be interfered with, for the dilation of the os is slowly accomplished, and the membranes should be kept intact as long as possible. This long first stage, however, is apt to exhaust the patient and make her irritable. We thus get spasmodic rigidity of the os tincæ and perineum.

After the rupture of the membranes, and the protrusion of the breech into the vaginal canal, the rigid perineum is apt to cause the flexible body and folded limbs to pack in the pelvis, and delivery is retarded. If this retardation continues, tonic uterine contractions are induced, and the child dies asphyxiated, or uterine inertion comes on and the fetus slowly dies from compression. In the cases reported, the large size of the children, and the easy delivery of the after-coming heads, show that impaction was not due to disproportion between the pelvis and the fetus.

These successive complications I believe are present in some degree in all breech presentations in primiparæ. The novelty of the situation, with its pain and anxious forebodings, tends to make such parturients nervous and irrritable. Under ordinary conditions, breech presentations should be severely let alone until the breech has cleared the vulva. The bag of waters can scarcely be left too long unbroken; the folded body best prepares the way for the after-coming head, and, therefore, the extremities should not be brought down. Tractions lead to extension of the chin and the passing of the arms above the head, and, therefore, ordinarily are unwise and vicious.

In cases, however, like the first two reported, there must be a departure from the ordinary methods, to avoid the ill results that followed.

In a prolonged first stage, the resulting irritability of nerve and muscle can largely be avoided by a free use of opium guarded by belladonna. Rest is thus secured; strength conserved; the os tincæ becomes relaxed, and the perineum distendible.

After the rupture of the membranes, the descent of the breech should be encouraged by pressure upon the fundus uteri during each pain. At the same time, two fingers in the vagina depressing the perineum would prevent impaction and increase the energy of the uterine contractions. Should impaction threaten, anasthesia should be induced, the feet brought down and tractions made; always, however, following the descending fetus with compression of the fundus uteri. This outline of treatment is, of course, to be modified by the idiosyncracies of the patient or peculiarities of the case.

Each of the three patients reported was deeply lacerated. Each laceration was treated differently.

Case 1 was not operated upon. The soft parts were so edematous and bruised as to forbid expectation of union. I believe this to have been an error of judgment. The edema soon subsided, there was no sloughing, and partial repair at least with much comfort would have followed the closing of the wound. The mere apposition of the parts without union is a great advantage to the patient, as illustrated in Case 2.

The latter was far less distressed during the first week of her lying-in, though her laceration was much more grave and no union resulted.

In Cases 2 and 3, both lacerations passed through the sphincter ani, and about an inch up the recto-vaginal septum. In Case 2, the whole wound was carefully closed with seven silver sutures. Non-union resulted. Septic fever was, however, present. In Case 3, but two sutures were used, one closing the vaginal rent and the other the perineum. The deep anal fissure was left untouched. Good union followed.

I believe these opposite results had their origin in the management of the torn sphincter ani. In such deep lacerations this muscle is a born disunionist, and chafes under the restraint of a stitch. It should be excluded in the closing operation. The end sought is to restore the integrity of the perineum. Even the rent in the recto-vaginal septum, unless extensive, is of less importance.

DR. D. T. NELSON: Perhaps it would be more appropriate for me to say something later in the discussion, but as I was cognizant of the first part of the history of the case, it may be interesting to state the condition of the patient before Dr. Knox saw her and kindly assisted, for I assure you we wanted not only his brains but his muscles. The attending physician and myself had become completely exhausted in attempting to dilate the perineum and cervix and make ready for some one to deliver. I believe I never saw a more rigid perineum; the cervix had dilated fairly well, but slowly and tediously, assisted I believe, by opiates—chloral had been given by the attending physician before I saw her. In theory and practice I have no doubt of the importance of aiding dilatation of the perineum when it does not dilate satisfactorily. This was one of those cases, rarely found, in which it was exceedingly difficult, almost impossible, to dilate. Considerable had been accomplished before Dr. Knox saw the patient, and yet I am sure he would be ready to testify that the perineum was not well dilated, and more, that it was not dilatable. It was ruptured before it was dilated. As to the wedging of the fetus into the pelvis or into the lower strait, it was to me an interesting fact, and I think I have seen it several times before. It ordinarily means the death of the fetus. Thus wedged in, when dead, the fetus is, so to speak, a ball of putty which can be crowded by the forces above into a mass against the resisting medium, whatever it may be. Pains had been increased by the manipulations in dilating the perineum, and I think that is an important advantage in many cases of difficult labor, that by attempting to dilate the perineum the pains will be strengthened, just as they are ordinarily in a normal condition of things when the head, or whatever the presenting part is, reaches the perineum. You have the advantage of the reflex

muscular contraction which makes the pains very much more powerful. But we had become exhausted in attempts at dilatation before Dr. Knox saw the patient, so we got very little advantage in that way. What advantages have we gained by the experience? It seems to me the proper place for improvement in treatment of such a case is during pregnancy or before pregnancy even, and the question is whether or not we could do anything to make the muscular structure better in quality. It seemed to me one of those cases in which there was, to a large extent, absence of the development of muscular structures in the vagina and perineum which ordinarily follows pregnancy. We are all aware that pregnancy makes a great change in the vagina, vulva, uterus and ovaries, and it seemed to me that change had not taken place as it should. There had not been the development of the muscular structures that would facilitate the delivery. She was much in the condition, when I first saw her, of a virgin. She was quite fleshy, and I think it is the experience of all of us that these are the patients whose perineums and other structures rupture; they do not dilate as well, perhaps from absence of muscular tissue, perhaps from the presence of fat. As to the restoration of the perineum, I remember well that we discussed the question whether it would be wise to attempt the immediate operation of the restoration of the perineum and other ruptured parts after delivery; my own thought, and I think it was the unanimous belief of those present, was that the woman would be no worse off if the immediate operation was performed, and probably would run less risk of sepsis, though we all doubted the satisfactory union of the parts. I heartily agree with Dr. Knox that, as a general rule, it is not wise for us to try to close the perineum and be thoughtless about the recto-vaginal septum and the sphincter ani. I should decidedly prefer, if I was to operate after another physician, to have the septum closed, and to have the opportunity of closing the sphincter and perineum. I think the first operation should be the closure of the septum. I think it will be found quite difficult to close the recto-vaginal septum, after the perineum and sphincter have been restored. I fully believe that the danger of sepsis and other serious complications are lessened by the immediate operation, even though the parts are so lacerated that we can hardly expect a satisfactory union, and I would do the primary operation unless the patient was so exhausted by the previous delivery as to forbid it.

Dr. Chas. Warrington Earle: Such difficult breech cases as our attention has been called to this evening are not frequent in my practice. Indeed, when I have seen pelvic presentations terminated before I could reach the case, safely to both mother and child, it has sometimes occurred to me that we exaggerated the dangers of these cases, and I have thought that the ordinary breech case gets along better without some doctors than with them. I think there is no doubt but that the temptation to extract quickly sometimes produces the complications we seek to avoid. The cases presented by Dr. Knox were indeed complicated, and, with his most able advisers, I believe the most judicious treatment was pursued, but I cannot see why episiotomy was not performed. This is an operation which, in my judgment, should not be done frequently or unadvisedly, but it occurs to me that here it would have been justifiable.

Dr. Nelson compares the condition of the child in the cavity of the pelvis to a mass of putty.

With such a condition of things as this—the child dead and the lower parts rigid—why waste time trying to deliver with forceps or anything else; why not perforate at once, reduce the size, and then deliver?

In regard to lacerations, I am an advocate of closing them all. I have never performed the immediate operation on the cervix, but I have witnessed it, and, if performed by a skilful operator, I think it justifiable. Certainly, it is our duty to do the immediate operation if the perineum is ruptured. I once saw Carl Braun's assistant do a craniotomy, in the course of which the cervix, a portion of the vagina, and the perineum were all torn. After the usual antiseptic precautions to the cavity of the uterus, he introduced retractors, and successively closed the rent in the cervix, then in the vagina, and then the perineum, using in all about sixty sutures.

I can easily see how in a small room, and with imperfect facilities, it would be impossible to do such an operation, yet the indications are, to thoroughly and antiseptically and immediately close these lacerations.

Dr. D. T. Nelson: I would like to say a few words in reference to some of the points raised which Dr. Knox did not know. As to the use of hot vaginal douches, the hot sitz-bath was not used; it was practically impossible, on account of the absence of conveniences. A hot-water vaginal douche was directed and repeatedly used during the first stage of labor. A word further with regard to the septic conditions: I believe the woman had septic fever, but I believe that antiseptic precautions were fairly used, not as they might be in a hospital, or as they would be in our best private practice. Vaginal douches of an antiseptic type were repeatedly used during the first stage of labor, and after delivery iodoform was constantly thrown into the vagina and over the vulva. As to closure of the perineum by primary operation, and putting in too many stitches, I have had some experience in that direction, and fully believe that putting in a large number of stitches, and closing the parts perfectly, is a desirable thing to do, and I have repeatedly had it succeed most admirably. I never had as bad a result as this one, and the reason is partly explained by the fact that we were working at a decided disadvantage. We did not think it safe to put the patient on the table, where we could have had an opportunity to perform the operation satisfactorily. More than half the stitches were put in by feeling, and not by the eye, and you can judge that they would not be well put in, and accurate coaption could not be secured. The expectation was not that there would be complete union, but that there would be less sepsis than otherwise, and I think the woman would have had far less chance of life if the operation had not been attempted.

As to turning and delivering the child by its feet, I think any gentleman would have found it a difficult task to turn that babe and deliver it. As to dilating the parts before the instruments are put on, it seems easy, and in every other case of breech presentation I ever saw it was exceedingly easy to deliver the patient, but this was so extremely difficult I was very glad to have Dr. Knox present to assist, as well by his fingers as his valuable head. If I should ever meet another such case, I would be glad to have some gentleman of the Society present, and if he can deliver with his fingers, they will be stronger than any that were present on this occasion; I feel sure there are no fingers in this Society that could have delivered that breech.

THE PRESIDENT: I would like to take exception to one of the main conclusions of the paper, that it is not well to try to do too much in closing the perineum. In those cases in which I have put in the most stitches, the union has been the most complete. I recently put in twelve stitches and got complete union, in a laceration extending into, but not through, the sphincter ani. In another extending through the sphincter ani, I obtained complete union by using fifteen stitches. I preserved a piece of the perineal centre, which was hanging out like the end of a finger, by stitching it back with buried juniper catgut. The reasons for failure are that the operation is poorly done, or imperfectly cared for afterwards. If the operator uses carbolized catgut, he will be sure to have occasional failures. I use buried sutures of juniper catgut in the recto-vaginal septum, instead of rectal sutures, and then stitch the vaginal edges, exactly as they belong, with the same material. The lowest external stitch should be taken low down and through the ends of the torn sphincter, as recommended by Emmet. Either this or the next one should pass deep enough into the perineal body and near enough to the rectal mucous membrane to sustain the rectal pressure or traction as far as possible. If these stitches be of silk-worm gut or silver, they will not give way, when properly and aseptically taken. I think the mistake is sometimes made of cutting off too many irregularities, instead of fitting them together. After the parts are united, we should, if the rectum has been lacerated, bind up the bowels for several days, and at first use plain vaginal douches, not carbolized ones, from three to five times in twenty-four hours. Beginning with the third and fourth day, carbolized douches should be employed. If we take all this care, the same as for the secondary operation, we will, unless the parts have been too badly bruised, have the same success.

DR. J. S. KNOX: In regard to the infection of these patients, Dr. Cotton told me his patient had no septic fever or rise of temperature, and he thought convalescence was delayed on account of the laceration of the parts. Dr. Michelet's patient had septic fever. The stitches were removed on the eighth day, and union was found not to have taken place. In my own case, the woman made a prompt recovery. I kept her in bed two weeks, because I had stitched the perineum; there was no rise of temperature, no signs of sepsis; she had a normal lying-in. I introduced my hand into the uterus and turned the child. I used no intra-uterine douche, but used an antiseptic vaginal douche, two or three times a day. In reply to Dr. Earle, the physicians were not trying to save the perineum, as the lacerations were not at all expected. I have repeatedly applied the forceps to the after-coming head in breech presentations, and always expect to deliver the head without laceration of the perineum. It has been my experience that when a delivery of the after-coming head is attempted instrumentally, it comes suddenly and unexpectedly; you make strong traction, and the head flies upon the perineum and out in the world in a moment, and I think the lacerations of the perineum occurred in this sudden popping-out, so to speak, of the after-coming head. Dr. Byford speaks of keeping the bowels bound up after operations of the perineum. I met with greatest success in keeping the bowels open; my inflexible rule is, after stitching the perineum, to administer to my patients, from the start, Friedrichshall or Hunyadi water. I like them to have a stool once in twenty-four hours without the use of an enema; I also like my patients to pass urine naturally, and then, as soon as the patient has urinated, to douche out the vagina and the wound. I think it is not judicious to keep the bowels constipated. In regard to Dr. Nelson's criticism of my conclusion about too much being attempted, I spoke only of this one case. I believe that all lacerations should be closed, if possible, and that every care should be taken to perform an immediate and complete operation. When, however, the conditions are such that one cannot make a complete operation, I should much prefer to close the perineum, leaving the sphincter ani muscle unclosed, to even leave the septum not stitched, rather than the perineum, because I believe that the results of a laceration of the perineum, unrepaired at the time, and left for a secondary operation, are quite serious. There seems to be a readjustment of all the organs of the pelvis; the position of the bladder, rectum, and uterus are not the same as before, and the longer the secondary operation is delayed the greater are the displacements. In this operation, I said, too much was attempted, because an appropriate and satisfactory operation could not be done under the circumstances.

All the surroundings were such that all operations were done with a great deal of difficulty; in fact, Dr. Nelson made half his stitches by touch, and not by sight. In my own case I was alone with no assistant but an ignorant Irish nurse and with a hysterical patient. In the case operated upon by Dr. Nelson, I think, if he had used less skill, he would have had a good perineum. Speaking from my personal experience, I think that manual dilation of the os in labor is injurious; I believe most thoroughly in the septic inoculation of the uterus by attempts to dilate the os in labor, even before the membranes are ruptured. When the os has become rigid, I occasionally introduce two fingers and try to retain what dilation has been accomplished by pains; but the dilation of the os, I think, is a vicious practice in ninety-nine cases out of a hundred, but by dilating the perineum when it is rigid I

have saved a rupture, in breech as well as vertex presentations. If impaction of the fetus and laceration is accomplished largely by rigid perineums, I think it is proper for the physician to do this operation, and I know that it does bring on more regular pains.

DR. EARLE asked if these women were subjected to a long hot-sitz bath as a means of assisting dilation?

DR. KNOX.—They were not. There are many things that have suggested themselves to me in connection with these cases. I believe that if hot vaginal douches, hot sitz-baths, and hot applications over the abdomen had been used, they would have been more satisfactory.

(To be concluded.)

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, December 8, 1887.

THE PRESIDENT, T. M. DRYSDALE, M.D., IN THE CHAIR.

(*Continued from page 150.*)

DR. BARTON C. HURST reported a case of

CHOREA IN A PREGNANT WOMAN.

It is not often that one has an opportunity to study chorea in the pregnant woman, and consequently each additional case that is reported must excite some interest. But aside from its rarity, the extraordinary mortality that attends this disease of pregnancy, as well as the constant disposition to abortion, lends additional interest to the study. Barnes, Jaccoud, Wenzel, Bamberg, Speigelberg and Hervé found respectively, in 56, 31, 66, 64, 69 and 14 cases a mortality, respectively, of 30, 12, 27, 28, 28 and 21 per cent. (Hervé: Thesé "De la Chorée pendant la Grosses-se," Paris, Théses de l'ecole de Medicine, 1883, 1884), while in more than half of all these cases the product of conception was expelled at varying periods before term. Without, however, entering into an extended consideration of the frequency, mortality, causes or treatment of chorea gravidarum, it is simply my intention to report to the Society a case which has recently come under my observation in the Maternity Hospital, the history of which may be briefly given as follows: Lizzie H., prima gravida, æt. 19, was admitted to the hospital last August, being then in the sixth month of pregnancy. There was, she said, no tendency to nervous disease in any member of her family, and she had herself been healthy until her ninth year, when she was seized with violent choreic movements of the left arm and leg. This attack lasted about a year, when it yielded to treatment; but the disease reappeared in her twelfth year. She was then sent to England, her family's home, in the hope that the change of climate and the sea voyage might benefit her; this it did greatly, and she was free from chorea until her return to this country in her fourteenth year, when the disease again appeared; this attack, however, lasting only fifteen weeks. Menstruation was established at the sixteenth year and, after recurring for a few periods, suddenly ceased and remained suppressed for five months, during the whole of which time the choreic movements, confined, as they had always been, to the left arm and leg, were so violent that the girl dared not go out of the house alone. With the reappearance of menstruation the movements suddenly ceased, and the patient remained free from the disease until the occurrence of the first fruitful coition, which was followed almost immediately by the reappearance of the chorea. No history of rheumatism could be elicited. The case first came under the notice of my colleague, Dr. Constantine Goodell, who placed the girl on increasing doses of iodide of iron and arsenic, much to her benefit. When I saw her the movements recurred every few seconds and seemed confined to the flexor muscles of the forearm and fingers on the left side and to the flexor and adductor muscles of the left thigh and leg. No abnormality of the heart could be detected except a slight rapidity of beat. The girl's appearance, which I had been told was very anæmic, was quite healthy. Dr. Goodell's treatment was continued with such marked and increasing good effect that towards the close of pregnancy the movements were little noticeable, whereas at first they had been so energetic as to interfere with locomotion. In the seventh, eighth and ninth months, however, during the time corresponding to the menstrual period, the disease grew worse and was associated with painful uterine contractions and a slight hæmorrhage. On November 11 active uterine contractions began, the pains recurring every two or three minutes, and the uterus contracting freely. This continued for four days, without in the slightest degree effecting the dilatation of the os; the patient meanwhile obtaining no rest day or night and the chorea growing rapidly worse again. Finally, on the fifth day, a bougie was introduced within the uterus. In three hours dilatation had begun and in twelve hours the baby was born. Fifteen days later the chorea had practically disappeared, and the child, carefully watched, has manifested no sign of the disease.

DR. GOODELL remarked that Dr. Barnes had collected fifty-six cases of chorea complicating pregnancy, and had found the mortality very heavy. Dr. Goodell had had one case of extreme severity at the Preston Retreat. The movements were unilateral, during labor they were astounding in their violence. Every muscular grimace and contortion possible was assumed. The patient was placed on thick carpets on the floor to prevent injury. This condition continued after labor until, completely worn out, she died. He had another case which, however, was controllable. The complication is a very fatal one, the mortality being about 30 per cent., if he remembered correctly Dr. Barnes' statistics.

DR. JOS. PRICE presented a large

MULTILOCULAR CYSTOMA THAT HAD COMPLICATED PREGNANCY AND LABOR.

The patient was very large and twins were ex-

pected, the presence of the tumor not being diagnosticated until after the delivery of the child. The tumor had many adhesions to surrounding surfaces, including the bladder. The recovery was slow and poor after the labor, but quite satisfactory after the removal of the tumor.

(*To be concluded.*)

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Prophylaxis of Diphtheria—Induction of Premature Labor in Amaurosis and Amblyopia from Albuminuria of Pregnancy.

At the second January meeting of the Academy of Medicine, Dr. A. Caille read a suggestive paper relating to the prophylaxis of diphtheria. He said that it was a fact that members of certain families, and especially children, had an attack of diphtheria every spring or autumn, and it had occurred to him that in all probability in such cases the microbes of the disease remained permanently in the system, continuing in a dormant condition until some hyperæmia of the faucial or nasal mucous membrane afforded an opportunity for the diphtheria to break out afresh. The disease was thus propagated by a process of auto-infection.

In order to make a practical test of the correctness of this hypothesis he selected eight individuals, of different ages, all of whom had had diphtheria at least twice—some of them a considerable number of times—prior to October 1, 1885. All belonged to families whom he had long known and who had continued to occupy the same residences or apartments. The first thing that he did was to cause all carious teeth to be filled or extracted. He then directed the mouth to be rinsed, the throat to be gargled, and the nose to be cleansed three times a day with either a 3 per cent. solution of potassium permanganate, a weak solution of liquor sodæ chlorinatæ, or a saturated solution of boric acid; the different solutions to be alternated with each other from time to time. In very young children the antiseptic solutions are dropped into the nostrils with a pipette. This practice was maintained throughout the year with the exception of the summer months, during which none of the subjects had ever had diphtheria.

As a result, apparently, of these precautions, not one of the individuals referred to has had an attack of diphtheria up to the present time, although some of them in the meanwhile have been exposed to the disease by other members of the family having it, While this result, Dr. Caille said, did not, of course, afford absolute proof of the truth of the view advanced by him or of the prophylactic power of such a plan of procedure as that described, it did go to show that if the nasal and oral cavities are kept clean by antiseptic washes, diphtheria was less liable to occur than if no such precautions were taken.

He then went on to say that hitherto in diphtheria far less attention had been paid to the matter of prevention than to that of treatment. One reason why it was difficult to employ an intelligent prophylaxis was because of our ignorance in regard to the nature and significance of so-called diphtheria; and since we could not in many instances distinguish between a contagious and a non-contagious sore-throat, the problem presented was a very unsatisfactory one to deal with. Still, as there was no specific treatment for diphtheria, prophylaxis, in the present state of our knowledge, was of more value to the public at large than treatment. Prophylactic measures might be divided into those relating to general sanitary conditions and those confined within the family. It was an unfortunate fact that in a large city the great majority of the inhabitants were unable to live in perfectly healthy dwellings, and hence the great importance of individual prophylaxis was obvious.

Dr. Caille concluded with some additional remarks on individual prophylaxis. He stated that enlarged tonsils increased the liability to diphtheria, and recommended that these should always be removed with the knife or, better, the galvano-cautery. Carious teeth should be extracted or filled, and he thought that provision should be made by which the poor could have dental cavities stopped with cement or amalgum free of charge or at a merely nominal price. He advised that parents should inspect their children's throats every morning before sending them to school, and that all children should be taught how to gargle at an early age. Children with sore throats should not be allowed to go to school. Kissing children on the lips should be forbidden, and parents should be urged to keep the upper air-passages of their children in as healthy a condition as possible.

In the discussion following the reading of the paper Dr. George T. Harrison said he had had such painful experience in the treatment of diphtheria that he was especially glad to hear something in regard to the prophylaxis of the disease, and he believed that the adoption of such precautionary measures as had now been suggested would be a step in the right direction. He was also glad, he said, to hear Dr. Caille emphasize the danger connected with so-called follicular amygdalitis, to which Dr. Jacobi had directed attention, as this was a matter in regard to which the profession as well as the laity, needed to be on their guard.

Dr. Fruitnignt said it was a common experience to find that the first case of diphtheria in a family had advanced to a very dangerous degree before the medical attendant was called in, and, consequently, was very likely to prove fatal. It was also noticeable that afterwards in such families the parents themselves often instituted a system of prophylactic measures; making it a daily practice to examine the children's throats, etc.

Dr. S. Bamch said he should think that the daily washing out of the nose by the insufflation of cold liquids was a very dangerous practice, on account of the liability to excite serious ear trouble.

Dr. Caille explained that he did not recommend the employment of cold liquids, and Dr. T. R. Pooley said that if the nasal douche was avoided and warm fluids were used in the form of spray or by dropping

into the nostrils, he did not think there was much risk of causing disease of the middle ear. The safest and best method of washing out the nose was by means of the post-nasal syringe.

Dr. Seibert called attention, by way of supplement to Dr. Caille's paper, to the importance of keeping children's stomachs in good condition, in order that the mouth and tongue might be clean. In his experience a furred tongue was always a hotbed for the development of diphtheritic trouble, and he thought that the candy shops in the vicinity of the public schools were responsible for a good deal of the diphtheria now so prevalent.

The President, Dr. Jacobi, said that if he understood the reader of the paper rightly, he held that when a patient had once had diphtheria the germs of the disease are likely to remain secreted in the mucous membrane and lymphatic glands; and he quite agreed with Dr. Caille in this opinion. Many of the worst cases of diphtheria were those in which there was immense glandular swelling with œdema. Such cases were very likely to prove fatal, but if the patients recovered the improvement dated from the time when these symptoms began to diminish. He was convinced, therefore, that diphtheritic germs were liable to remain in the lymphatics.

If, as has been remarked, the mouth and nose were in a healthy condition, diphtheria was always less likely to occur; while, if an epidemic of the disease appeared in a neighborhood, the children living there who had a catarrh were especially liable to be attacked. Diphtheria was like erysipelas in this respect. When there was an epidemic of the latter disease in any locality the slightest scratch was likely to induce an attack of it, while those who were free from any sore or abrasion of the surface escaped.

There was another way in which diphtheria recurred, and in connection with this there was a point of great practical value in its prevention to which Dr. Jacobi said he desired to call attention. It had often been noticed that cases in which it was thought the attack was about over had a relapse, and in some instances there would be three or four attacks in quick succession. The reason for this was simply because the room, the bed, the curtains and the carpets had become infected; and he had therefore made it a rule, whenever this was practicable, to change the room of the patient every two or three days, even if the room to which the removal was made was not as desirable as the one first occupied. In some cases he had found it necessary to have the patient taken out of the house altogether.

In answer to a question by Dr. Holt, as to whether there were any sufficient data to indicate that children with enlarged tonsils were more subject to diphtheria than others, Dr. Caille said that his own experience went to show that such children were more liable than others to be attacked, but he had found that as a rule the disease in these cases was of a comparatively mild form.

Dr. Jacobi said that the reason why the tonsils were so frequently the primary causes of diphtheria was because they stood so much in the way of the air-current; so that deposits were extremely liable to take place on them. Again, whenever the tonsils were enlarged there was a liability of mucus accumulating behind them. Enlarged tonsils were usually combined with a subacute or chronic nasal catarrh or pharyngitis, and the sooner, therefore, the tonsils were reduced, and the pharyngitis removed, the better would be the prospect of the child's escaping diphtheria.

Dr. Joseph W. Winters said that when diphtheria appeared in a family, in addition to enforcing strict isolation and attending carefully to disinfection and the general sanitary condition of the premises, he inspected the throat of every member of the household daily, and if there were any children, ordered them to take full doses of tincture of chloride of iron (say 20 drops or more, three times a day), and tonic doses of quinine. At the same time he directed that they should be kept in the open air as much as possible, should sleep in rooms free from pipes connecting with sewers, and be given simple diet. Their digestive organs should be maintained in good condition, and to this end he usually prescribed small doses of mercury as a purgative two or three times a week. When adopting these precautions he rarely saw cases of diphtheria occurring in the same family.

On the same evening Dr. T. R. Pooley read a paper on "The Induction of Premature Labor in Amaurosis and Amblyopia from Albuminuria of Pregnancy," in which the following conclusions were arrived at:

1. In all cases of pregnancy, not only should examinations of the urine be systematically made, but the eyes should be examined with the ophthalmoscope, since, in a large proportion of cases where eye-troubles exist, the patients make no complaint of disorders of vision. Frequently such troubles can be detected with the ophthalmoscope long before any disease of the kidney is shown in the urine.

2. In uræmic amaurosis without changes in the eye visible to the ophthalmoscope, even should the usual accompanying symptoms, such as dizziness, nausea and threatened convulsions, be absent, their supervention is soon to be anticipated; and the immediate induction of premature labor is indicated, without waiting until the life, as well as the sight of the patient is in danger.

3. In neuro-retinitis the induction of premature labor is not only justifiable, but urgently demanded. In some instances it is called for even in the earlier months of pregnancy.

4. It is required in certain cases of eye-trouble recurring in successive pregnancies.

5. A woman having once suffered in this way during pregnancy, the relationship of cause and effect should be fully explained both to herself and her husband.

P. B. P.

ASSOCIATION ITEMS.

List of Officers.—When the list of Officers of the Association was published the address of Dr. F. C. Hotz, Chairman of the Section on Ophthamology, Otology and Laryngology, was incorrectly given,

owing to a somewhat recent change. It should have been 103 State St., Chicago, Ill.

The chairmen of several of the Sections have already reported lists of excellent papers promised for the coming meeting.

BOOK REVIEWS.

THE RECTUM AND ANUS: Their Diseases and Treatment. By CHARLES B. BALL, M. Ch., F. R. C. S. I., Surgeon to Sir Patrick Dun's Hospital, etc. With 54 Illustrations and four Colored Plates. 8vo, pp. viii. 410. Philadelphia: Lea Brothers & Co.; Chicago: A. C. McClurg & Co.

This is a systematic and complete treatise of over 400 pages, well illustrated, and brought down to the present in point of all important improvements. Considered as a whole the work is much more fully elaborated than either Allingham's, Curling's, or Kelsey's, although apparently not a large treatise, being printed after the custom of the Lea Brothers, in compact form, on thin paper. Little attention is given to the injection treatment of hemorrhoids, which the author speaks very slightingly of. The same may be said of various other methods of the American "rectal specialists." Without directly intending it, probably, the author very neatly pricks the pretentions of those that claim originality for the discovery of rectal "pockets" by giving quite a complete summary of the pathology and treatment as practiced by many surgeons in ulcerations of these pouches. Not only does it appear that these were anatomically very well known, but that they have been split up and otherwise operated upon many times by surgeons for various reasons. Many chapters of this work are commendable for the thoroughness and clearness of their discussion, and none more so than that upon fissure, which gives the best co ntribution we have as yet seen to the pathology and causation of this singular affection.

THE THROAT AND ITS DISEASES, Including Associated Affections of the Nose and Ear, with 120 Illustrations in Color, and 200 Engravings Designed and Executed by the Author, LENOX BROWNE, F. R. C. S. E., etc. Second edition, Rewritten and Enlarged. 8vo, pp. 614. Philadelphia: Lea Brothers & Co.; Chicago: A. C. McClurg & Co.

The author of the volume before us will be remembered by many American readers who attended the last International Congress for the able paper that he presented and discussions that he took part in, as well as for his genial, kindly manner. The first edition of this work has been well known, but has been completely rewritten by the author for this, the second edition. In reading the book one cannot but be impressed with the clearness of the explanations and the practical character of the advice. The beauty, fulness and correctness of the illustrations enhance the value of the work very greatly. The colored illustrations, which are beautifully executed, are much better than those of any similar text-books with which we are acquainted. The chapters on diseases of the nose and ear might advantageously be increased in number, in order to make the work still more complete. It will undoubtedly prove one of the most popular works upon the subject, both among practitioners and students.

MISCELLANEOUS.

THE WILLIAM F. JENKS MEMORIAL PRIZE.—The First Triennial Prize, of Two Hundred and Fifty Dollars, under the Deed of Trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Diagnosis and Treatment of Extra-uterine Pregnancy."

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with Obstetrics, or the Diseases of Women, or the Diseases of Children;" and that "the Trustees under this deed for the time being, can in their discretion publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may in their judgment be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said Trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., addressed to Ellwood Wilson, M.D., Chairman of the William F. Jenks Prize Committee, before January 1, 1889.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if no essay submitted is considered worthy of the prize.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 28, 1888, TO FEBRUARY 3, 1888.

PROMOTIONS.

Lt.-Col. Charles Page, Surgeon, to be Asst. Surgeon-General with rank of Colonel, November 17, 1887.

Major James C. McKee, Surgeon, to be Surgeon with rank of Lieut.-Col., November 17, 1887.

Capt. Alfred C. Girard, Asst. Surgeon, to be Surgeon with rank of Major, November 17, 1887.

First Lieut. W. W. R. Fisher, Asst. Surgeon, granted leave of absence for one month, on surgeon's certificate of disability. S. O. 4, Dept. Cal., January 20, 1888.

First Lieut. H. I. Raymond, Asst. Surgeon, ordered to Ft. Bidwell, Cal.

First Lieut. W. W. Fisher, Asst. Surgeon, ordered to Presidio of San Francisco, Cal. S. O. 25, A. G. O., January 31, 1888.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDING FEBRUARY 4, 1888.

P. A. Surgeon D. A. Carmichael, detailed as attending surgeon and acting Chief Clerk Supervising Surgeon-General's Office. February 2, 1888.

P. A. Surgeon F. M. Urquhart, granted leave of absence for twenty days, on account of sickness. February 3, 1888.

Asst. Surgeon L. L. Williams, ordered to examination for promotion. February 2, 1888.